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Water Resources Data for Tennessee

Water Year 1977

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U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-77-1

Prepared in cooperation with the Tennessee Department of Conservation, Division of Water Resources; the Tennessee Valley Authority; and with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1977

1976

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Water Resources Data
for
Tennessee

Water Year 1977

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-77-1

Prepared in cooperation with the Tennessee Department of Conservation, Division of Water Resources; the Tennessee Valley Authority; and with other State, municipal, and Federal agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

For information on the water program in Tennessee write to
District Chief, Water Resources Division
U.S. Geological Survey
A-413 Federal Building, U.S. Courthouse
Nashville, Tennessee 37203

1978

PREFACE

This report was prepared by personnel of the Tennessee district of the Water Resources Division of the U.S. Geological Survey under the supervision of Stanley P. Sauer, District Chief, and L. B. Laird, Regional Hydrologist, Southeastern Region. It was done in cooperation with the State of Tennessee and with other agencies.

This report is one of a series issued by State. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management

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16. Abstracts

Water resources data for the 1977 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells. This report contains discharge records for 105 gaging stations; stage only records for one lake gaging station; elevation and contents for 27 lakes and reservoirs; water quality for 134 gaging stations, 99 partial-record flow stations, and 56 wells; and water levels for 32 observation wells. Also included are 116 crest-stage partial-record stations and 35 low-flow partial-record stations. Other data were collected and published for miscellaneous stream and spring sites, or as seepage investigations of discharge and water quality. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

17. Key Words and Document Analysis. 17a. Descriptors

*Tennessee, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment analyses, Water temperatures, Sampling sites, Water levels, Water analyses.

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(Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (m) microbiological, (t) water temperature, (s) sediment, (e) elevation or contents, (p) pesticides)

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WATER RESOURCES DATA FOR TENNESSEE, 1977

INTRODUCTION

Water resources data for the 1977 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This report contains discharge records for 105 gaging stations; stage only records for one gaging station; stage and contents for 27 lakes and reservoirs; water quality for 134 gaging stations, 99 partial-record stations and miscellaneous sites, and 56 wells; and water levels for 32 observation wells. Also included are 116 crest-stage partial-record stations and 35 low-flow partial-record stations. Additional water data were collected at various sites, not involved in the systematic data collection program, and are published as miscellaneous stream and spring measurements or as seepage investigations of discharge and water quality. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report TN-77-1." Water-Data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA, 22161.

COOPERATION

The U.S. Geological Survey and organizations of the State of Tennessee have had cooperative agreements for the systematic collection of stream flow records since 1918, for ground-water levels since 1946, and for water-quality records since 1960. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Tennessee Department of Conservation, B. R. Allison, commissioner, through Division of Water Resources, Robert A. Hunt, director.

Tennessee Department of Public Health, E. W. Fowinkle, commissioner, through Water Quality Control Division, John W. Saucier, director.

Tennessee Department of Transportation, Eddie Shaw, commissioner, through Lewis Evans, director of Bureau of Highways, and H. W. Derthick, engineer of structures, and Richard L. Iddins, Jr., roadway design engineer.

City of Lawrenceburg, Ivan Johnson, mayor.

City of Memphis, Wyeth Chandler, mayor.

City of Murfreesboro, J. W. Lovell, superintendent, water and sewer department.

Lincoln County Utility Board, W. W. Newman, Jr., chairman

Shelby County, Roy Nixon, mayor.

Metropolitan Government of Nashville and Davidson County, Richard H. Fulton, mayor, through Department of Public Works, W. D. Lamb, director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, Nashville District, in collecting records for 19 gaging stations and three water-quality stations, by the Tennessee Valley Authority for 45 gaging stations, 16 thermograph stations, and water-quality analyses at 46 stations, by the Federal Power Commission (licensee Aluminum Company of America) for one gaging station, and by the Soil Conservation Service for one gaging station and two thermographs. Also the Tennessee Valley Authority and Soil Conservation Service assisted in collecting discharge and water-quality data at many miscellaneous and partial-record stations. All data are published in this report.

The following organizations also aided in collecting records for publication in this report:

Bowaters Southern Paper Corporation
Cities Service Company (Copperhill, Tennessee Operations)

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

Tennessee district personnel who contributed significantly to the collection and preparation of data in this report were: V. J. May, chief, Hydrologic Data Section, Bernard J. Frederick, chief, Knoxville Subdistrict, Charles W. Boning, chief, Memphis Subdistrict, and Fayne D. Edwards, acting chief, Nashville Field Headquarters; and later, Charles R. Burchett, chief, Nashville Field Headquarters.

HYDROLOGIC CONDITIONS

Runoff for the 1977 water year varied across the State from below normal in western and north central Tennessee to near normal over the rest of the State. In extreme eastern Tennessee, runoff from the mountains was slightly above normal. There were no critically-short water problems anywhere across the State. Severe flooding occurred in eastern Tennessee and was localized to a few basins. Monthly and water year runoff averages for three long-term index gaging stations for the 1977 water year and the long-term period 1941-70 are shown in figure 2. Since none of these index stations are located in western Tennessee, illustration does not show the drier than normal conditions that occurred in that part of the State.

During the water year, runoff was excessive, within the upper 25 percent of record for the long-term base period 1941-70, for October and September statewide, for March in western Tennessee, and for April in the eastern two-thirds of the State. A new maximum monthly mean runoff for the 30-year base period occurred in April for the index station in eastern Tennessee.

Normal or near normal runoff occurred for November, December, and May through August statewide, for January and April in western Tennessee, for February in the Cumberland River basin, and for March in the eastern part of the State. Although runoff was near normal during these periods, most of the time it was less than the long-term median.

Runoff was deficient, within the lower 25 percent of record for the 30-year base period, for January in eastern Tennessee, and for February for the eastern two-thirds of the State. The western part of the State had the lowest percentage of normal runoff for the water year. The Obion River basin, a major basin in northwest Tennessee, had a total runoff for the water year of 58 percent of the average for the basin over the last 40 years.

During the period April 2-5, heavy rainfall over the northern part of the Tennessee River valley in eastern Tennessee produced major flooding. The storm was concentrated primarily over the Clinch, Powell, Holston, and French Broad River watersheds. Gaging stations on the Powell and Clinch Rivers exceeded prior known floods back to 1826 and 1862 respectively. Damages in Tennessee were estimated to be $15-$20 million.

Monthly rainfall averages were greater than long-term averages for October, March, April, and September statewide. The average for September was the greatest for the period of record back to 1890. Less than long-term averages occurred for the months of November through February, and May through August. Average monthly rainfall for these periods ranged from 30 to 80 percent of normal.

Contents of principal reservoirs were above normal monthly averages by 110 to 120 percent for the months of October through December, and for April. Contents were less than monthly averages for January through March, and June through August, by 85 to 90 percent. The average reservoir contents for May and September were about average.

During the water year, natural ground-water levels across Tennessee showed normal seasonal fluctuations. The highest levels generally occurred in March or April and the lowest levels in September or October. Because of deficient rainfall December through March and excessive rain fall in October, November and September this water year, the magnitude of fluctuations were not as great as normal. In other words, there was a flatter ground-water levels hydrograph than normal. Some ground-water levels approached the maximum distance below land-surface for the period of record.

Figures 3 and 4 show ground-water hydrographs for four observation wells. The range of lowest monthly water levels along with the average of these lowest monthly values, for the period of record is shown for each well. The 1977 water year monthly lows are plotted on these graphs for comparison purposes.

Ground-water levels were lower than normal in the western one-half of the State for all months of the water year. Levels were generally lower than normal in the eastern one-half of the State for the months of December through September, and about normal for October and November. Critical ground-water shortages did not occur anywhere in the State. However, a few towns or utility districts had to locate and drill additional wells to provide adequate water.

Heavy ground-water pumpage in Memphis and surrounding areas in Shelby County has created a cone of depression that affects ground-water levels at the network observation wells located in Shelby County. Both water table levels and artesian head in confined aquifers, which are the supply sources for the Memphis municipal water system, are recorded by observation wells. Fluctuations in artesian head and water table levels vary throughout the area based on pumping rates, location of pumping centers, the artesian aquifer tapped, and location within the cone of depression.

Records for observation wells in Shelby County are published in this report. The fluctuations throughout the water year, as well as the minimums for the year and period of record are noted.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C ± 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in g/m^3 (grams per cubic meter), and periphyton and benthic organisms in g/m^2 (grams per square meter).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll *a* and *b* are the two most common pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an aritficial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT^3/s, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to the amount of substance present in true chemical solution. In practice, however, the term includes all forms of substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (coloidal) suspended particles. Analyses are performed on filtered samples.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where ni is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (µg/g) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L, and is based on the mass of sediment per liter of water-sediment mixture.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.0	Sedimentation or sieve.
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticides are chemical compounds used to control the undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or

volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexageria
Species	Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or digital mechanism that automatically records water temperatures on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therfore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 03540500, which appears just to the left of the station name, includes the 2-digit part number "03" plus the 6-digit downstream order number "540500".

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The 8-digit downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells or other sites within a 1-second grid. See figure 1 below.

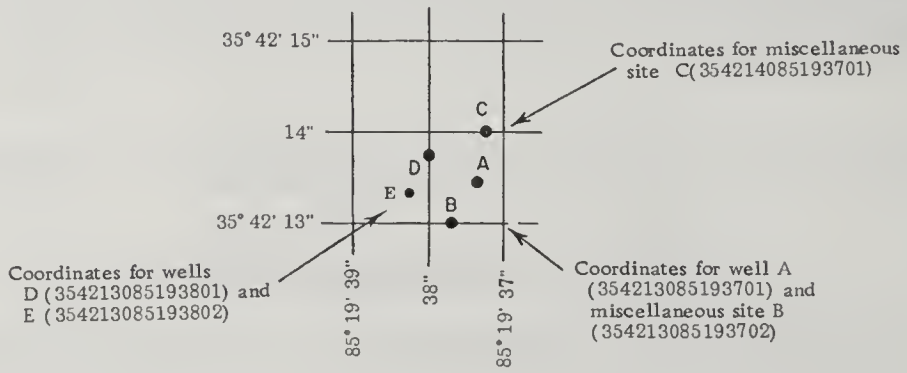

Figure 1.--System for numbering wells and miscellaneous sites (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by

the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging stations gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Geological Survey, Tennessee Valley Authority, or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey unless otherwise qualified.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "EXTREMES" are given first the extremes for the period of record, second, information available outside the period of record, and last those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030; 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions.

Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole number between 10 and 1,000 ft^3/s; and 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

Records of discharge not published by the Geological Survey were collected during water year 1977 at 58 sites in Tennessee, 18 by the Tennessee Valley Authority, 10 by the Nashville District, Corps of Engineers, and 30 by the Memphis District, Corps of Engineers, U.S. Army. The Office of Water Data Coordination, Water Resources Division, U.S. Geological Survey, National Center, Reston, Va. 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 1.

Measurements are made in many types of wells, under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitide of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office. Prices are effective January 1978 but are subject to change.

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

1-D1. *Water temperature-influential factors, field measurement, and data presentation,* by H. H. Stevens Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. $1.60.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W.W.Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages. $0.85

2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. $1.90.

2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. $1.75.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages. $1.00.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. $0.35.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. $1.00.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.35.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. $1.00.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $1.40.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. $1.20.

3-A12. *Fluorometric procedures for dye tracing,* by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2 1976. 172 pages. $2.50.

3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $0.65.

3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2, 1970. 59 pages. $2.50.

3-C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $2.10.

4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. $1.60.

4-A2. *Frequency curves,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $0.35.

4-B1. *Low-flow investigations,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. $0.65.

4-B2. *Storage analyses for water supply,* by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.65.

4-D1. *Computation of rate and volume of stream depletion by wells,* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. $1.10.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases,* by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. *Determination of minor elments in water by emission spectroscopy,* by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. *Methods for analysis of organic substances in water,* by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples,* edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. $20.00.

5-A5.* *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. $16.00.

5-C1. *Laboratory theory and methods for sediment analysis,* by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $2.10.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. $2.30.

8-A1. *Methods of measuring water levels in deep wells,* by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. $0.70.

8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

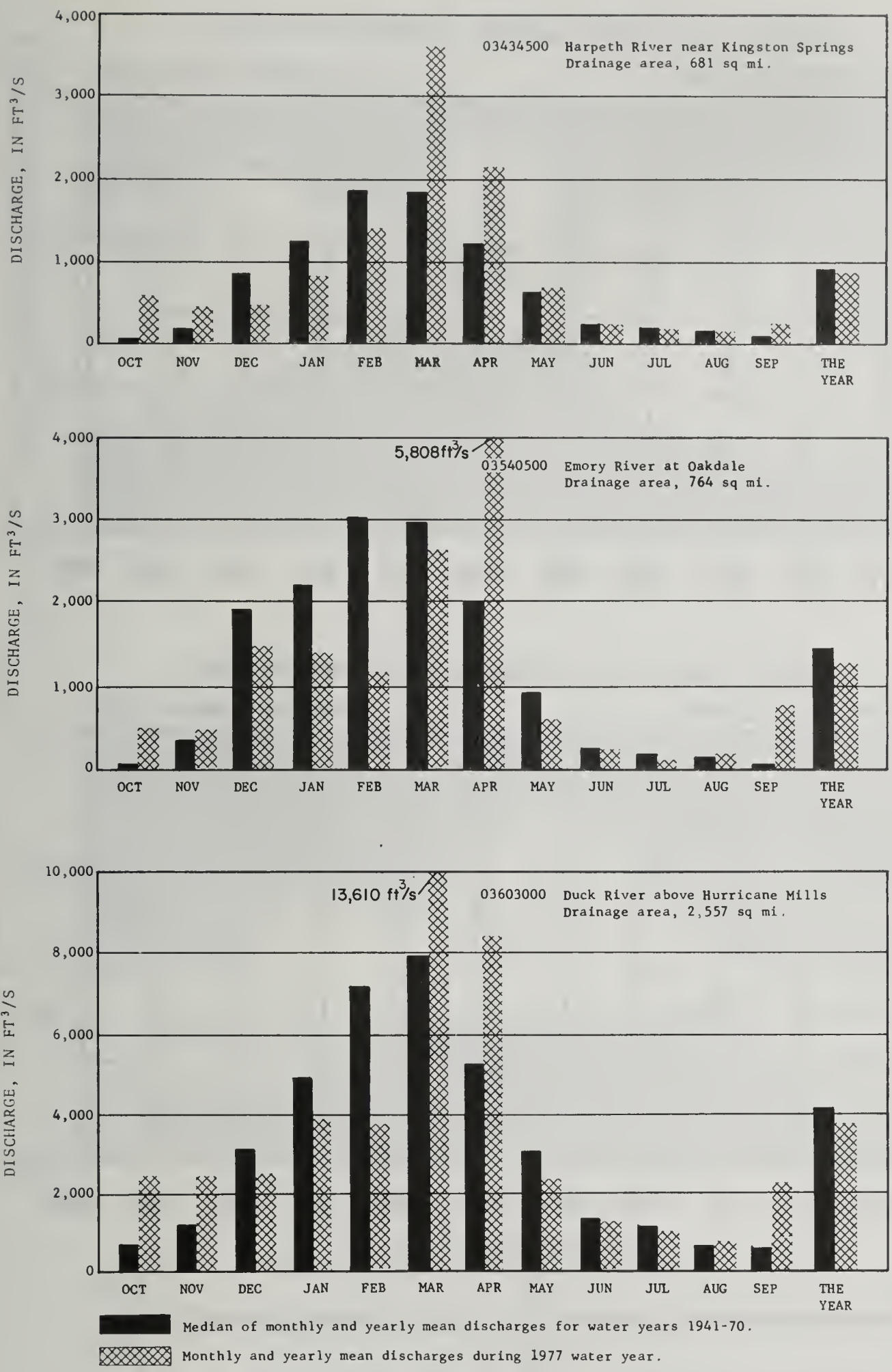

Figure 2.--Runoff during 1977 water year compared with median runoff for period 1941-70 for three representative gaging stations.

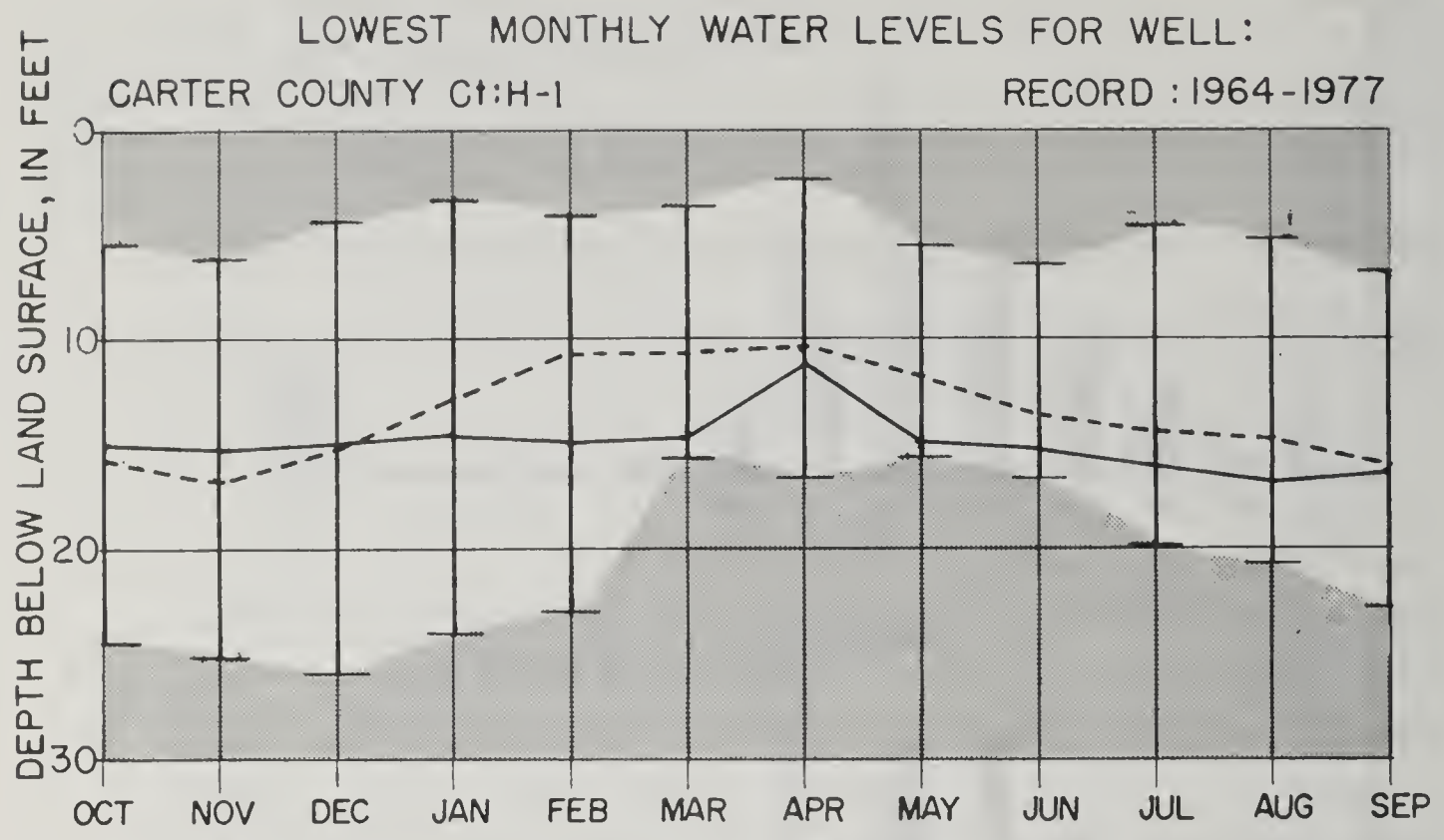

Figure 3.--Lowest monthly ground-water levels for the 1977 water year compared to the maximum, minimum, and average lowest monthly water levels for the previous years of record.

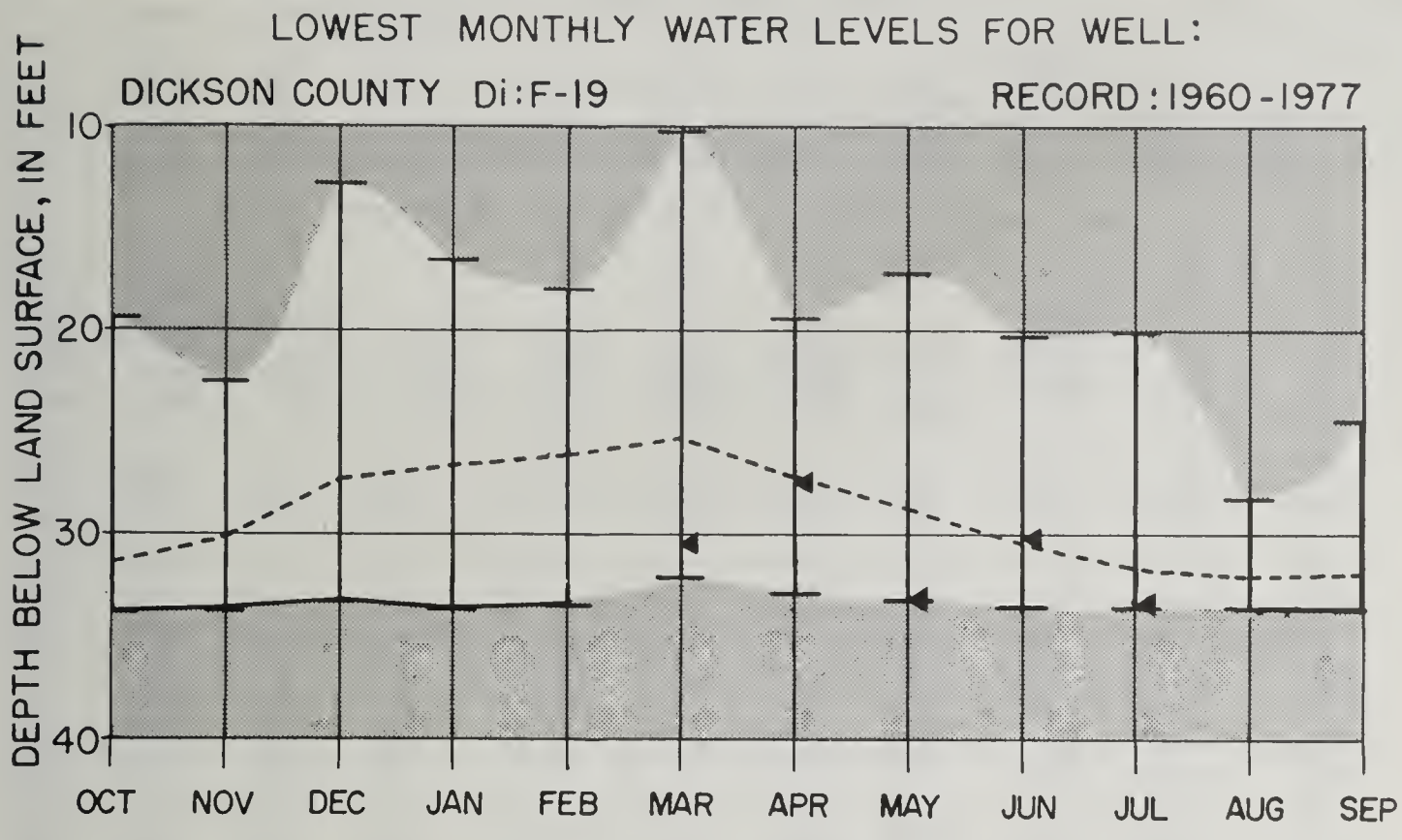

Figure 4.--Lowest monthly ground-water levels for the 1977 water year compared to the maximum, minimum, and average lowest monthly water levels for the previous years of record.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN

LOCATION.--Lat 36°09'37", long 84°23'15", Anderson County, Hydrologic Unit 05130104, 0.7 mi (1.1 km) northwest of Braytown, 0.8 mi (1.3 km) north of Moores Camp, and 2.4 mi (3.9 km) southwest of Rosedale.

DRAINAGE AREA.--4.32 mi^2 (11.19 km^2).

PERIOD OF RECORD.--January 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
JAN										
15...	--	8.2	6.6	--	4.0	10	--	--	3.0	40
22...	--	6.2	6.7	6.0	6.5	4	--	--	2.8	32
27...	1250	7.4	6.5	16.5	6.0	2	--	--	3.0	30
FEB										
03...	--	16	7.1	8.0	7.0	66	--	--	3.0	27
07...	--	12	7.1	1.2	4.0	25	--	--	3.6	31
14...	--	--	6.9	11.2	7.2	9	--	--	3.4	33
19...	1700	4.9	7.1	2.8	6.2	8	--	--	2.6	35
26...	--	4.4	7.0	10.3	7.2	24	180	170	2.9	40
MAR										
05...	--	1.6	6.6	18.0	10.5	45	290	280	3.2	67
19...	--	34	7.0	10.0	8.2	23	180	170	2.9	44
28...	--	11	6.7	21.5	14.8	16	210	200	3.1	50
APR										
03...	--	11	6.2	6.9	9.0	3	210	200	2.4	46
08...	--	5.9	5.9	17.0	9.4	32	300	300	3.2	72
17...	--	5.3	5.8	24.2	16.4	27	310	310	4.2	72
24...	--	7.7	5.9	22.7	15.4	8	240	230	3.2	54
MAY										
01...	--	6.1	6.1	22.0	18.4	9	280	260	3.3	63
13...	--	2.8	6.2	21.3	18.5	100	370	370	4.9	80
14...a	1430	3.0	6.7	--	19.2	85	390	390	--	--
22...	--	--	6.2	30.2	21.6	10	260	260	3.8	58
29...	--	--	5.9	24.0	20.1	52	390	380	7.1	89
JUN										
07...	--	--	5.8	25.1	22.0	2	400	400	4.3	95
16...	--	23	7.1	27.6	21.8	1	140	120	2.4	32
25...	--	12	6.9	28.3	21.5	110	180	170	3.5	38
JUL										
02...	--	3.7	6.6	28.7	22.2	4	350	350	4.1	82
09...	--	6.1	6.9	29.1	22.3	8	230	220	3.0	56
16...	--	2.6	6.3	28.4	22.1	60	370	370	3.9	90
26...	--	1.9	5.7	28.1	21.6	62	480	480	4.1	120
31...	--	1.9	6.1	27.8	21.2	54	510	510	3.7	121
AUG										
10...	--	8.4	7.5	28.0	20.1	1000	220	210	3.2	46
13...	--	1.3	5.1	28.7	21.6	6	510	510	4.1	126
20...	--	--	6.7	29.4	22.1	7	340	330	4.4	81
28...	--	--	5.6	29.8	24.2	50	530	520	7.0	128
SEP										
05...	--	.76	5.7	29.9	22.0	30	620	610	4.8	152
10...	--	.80	6.1	24.6	19.4	11	610	600	4.2	148
17...	--	4.6	6.9	20.3	15.6	52	460	450	4.3	94
24...	--	--	6.8	19.2	15.0	20	170	160	6.2	43

a Sample collected and analyzed by the U.S. Geological Survey.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN										
15...	--	18	--	23	19	9.2	210	4.8	305	ND
22...	--	15	--	29	24	9.3	205	4.9	325	ND
27...	--	14	--	24	20	12	185	4.8	530	ND
FEB										
03...	--	12	--	24	20	2.5	215	4.6	575	ND
07...	--	13	--	23	19	2.8	190	4.8	290	ND
14...	--	14	--	25	21	5.0	210	4.9	305	ND
19...	--	15	--	21	17	2.6	220	5.1	505	ND
26...	43	17	17	17	14	2.7	220	4.8	590	--
MAR										
05...	70	26	27	9	7	3.5	210	4.7	375	ND
19...	43	19	18	15	12	2.4	300	4.9	465	ND
28...	50	21	21	14	11	3.7	350	5.0	590	ND
APR										
03...	49	14	20	11	9	9.9	325	5.1	285	ND
08...	72	31	30	2	2	4.0	475	4.9	635	ND
17...	73	31	30	5	4	12	400	5.0	6300	ND
24...	56	24	23	10	8	18	350	4.9	5500	ND
MAY										
01...	66	28	27	6	5	6.6	375	5.0	3200	ND
13...	87	38	37	2	2	1.8	700	5.1	3800	<1
14...	97	--	37	6	5	1.9	500	1.1	--	0
22...	63	26	25	6	5	5.7	485	4.9	1200	<1
29...	95	39	38	8	7	14	650	4.9	1800	<1
JUN										
07...	94	42	39	5	4	13	1000	4.8	2000	<1
16...	33	14	14	28	23	3.4	300	4.5	2800	<1
25...	44	18	17	7	6	1.3	275	4.7	6600	ND
JUL										
02...	82	37	35	5	4	2.0	650	4.8	8800	ND
09...	55	24	23	7	6	1.3	400	4.9	7800	ND
16...	86	40	37	6	5	4.8	700	5.0	9140	ND
26...	114	50	48	5	4	16	900	4.9	12500	<1
31...	120	54	52	6	5	6.8	800	4.7	12900	ND
AUG										
10...	53	21	20	12	10	.6	350	5.0	13800	ND
13...	121	54	51	6	5	68	1025	5.0	5140	<1
20...	79	36	34	10	8	2.8	600	4.8	2600	<1
28...	125	56	53	7	6	23	1050	4.8	500	<1
SEP										
05...	144	66	63	7	6	18	1250	4.0	772	<1
10...	140	66	64	7	6	8.9	1100	6.2	760	<1
17...	100	50	50	15	12	3.0	500	3.4	1410	<1
24...	40	16	16	15	12	3.8	190	4.2	360	<1

ND--Material specifically analyzed for but not detected.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
JAN									
15...	--	ND	--	3	--	17	2	--	1700
22...	--	ND	--	1	--	16	3	--	2100
27...	--	ND	--	<1	--	11	1	--	1900
FEB									
03...	--	ND	--	10	--	18	8	--	4700
07...	--	ND	--	3	--	14	4	--	3500
14...	--	ND	--	<1	--	12	2	--	2600
19...	--	ND	--	1	--	13	2	--	2300
26...	--	--	--	2	ND	--	3	ND	4700
MAR									
05...	ND	ND	ND	<1	ND	--	14	10	7200
19...	ND	ND	ND	--	--	--	46	5	2200
28...	ND	ND	ND	--	--	47	21	2	2500
APR									
03...	ND	ND	ND	--	--	--	10	4	800
08...	<1	ND	1	--	--	--	14	6	--
17...	ND	ND	ND	--	--	--	8	2	7200
24...	ND	ND	ND	--	--	--	11	3	14000
MAY									
01...	ND	ND	ND	--	--	--	18	3	14000
13...	<1	1	1	--	--	--	25	9	37000
14...	--	1	--	<10	--	20	2	--	21000
22...	ND	1	ND	--	--	--	18	3	9000
29...	<1	1	1	--	--	--	18	3	21000
JUN									
07...	<1	1	1	--	--	--	9	6	15000
16...	<1	1	1	--	--	--	15	5	3000
25...	ND	ND	ND	--	--	--	54	13	7000
JUL									
02...	ND	ND	ND	--	--	--	13	4	14000
09...	ND	ND	ND	--	--	--	19	7	6000
16...	<1	ND	1	--	--	--	9	9	12000
26...	<1	1	1	--	--	--	11	6	17000
31...	ND	ND	ND	--	--	--	13	12	19000
AUG									
10...	<1	ND	1	--	--	--	24	15	11000
13...	ND	1	ND	--	--	--	13	18	14000
20...	<1	1	1	--	--	--	23	6	6000
28...	<1	1	1	--	--	--	17	34	15000
SEP									
05...	<1	1	1	--	--	--	32	30	23000
10...	<1	1	1	--	--	--	13	12	19000
17...	<1	1	1	--	--	32	68	4	54000
24...	<1	1	1	--	--	7	19	6	3300

ND--Material specifically analyzed for but not detected.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JAN									
15...	--	ND	--	250	--	44	--	20	--
22...	--	ND	--	750	--	46	--	10	--
27...	--	ND	--	680	--	42	--	8	--
FEB									
03...	--	ND	--	130	--	31	--	30	--
07...	--	ND	--	670	--	31	--	20	--
14...	--	ND	--	680	--	25	--	10	--
19...	--	ND	--	690	--	24	--	20	--
26...	1700	ND	ND	880	870	42	36	40	40
MAR									
05...	2600	ND	ND	1270	1350	62	55	70	50
19...	ND	ND	ND	840	820	38	49	30	7
28...	200	ND	ND	750	940	26	38	30	20
APR									
03...	ND	ND	ND	630	910	13	34	10	30
08...	1400	ND	ND	1300	1420	49	60	90	70
17...	1000	ND	ND	1360	1380	49	46	60	50
24...	110	ND	ND	1190	1070	38	26	60	20
MAY									
01...	120	ND	ND	1290	1250	44	34	70	30
13...	--	ND	ND	1740	1690	110	46	130	70
14...	4500	19	--	1900	--	53	--	80	--
22...	--	13	ND	1100	800	30	ND	70	5
29...	50	ND	ND	1900	1700	65	46	100	40
JUN									
07...	380	ND	ND	2100	2000	56	44	80	50
16...	ND	ND	ND	500	500	ND	ND	20	8
25...	ND	--	--	700	1100	ND	ND	50	8
JUL									
02...	ND	--	--	1700	1600	44	76	60	20
09...	ND	--	--	1100	1000	--	--	40	10
16...	360	--	--	1900	1800	--	--	60	40
26...	6000	--	--	2400	2300	--	--	80	60
31...	7000	--	--	2700	2600	--	--	90	70
AUG									
10...	130	--	--	1100	400	--	--	70	10
13...	3000	--	--	2800	2700	--	--	80	70
20...	320	--	--	1800	1400	--	--	40	10
28...	4000	--	--	2900	2700	--	--	80	70
SEP									
05...	700	--	--	3700	3600	--	--	110	100
10...	14000	--	--	3300	3200	--	--	100	90
17...	46	--	--	2400	600	--	--	80	--
24...	146	--	--	700	600	--	--	20	10

ND--Material specifically analyzed for but not detected.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA.MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
10...	--	--	6.8	23.6	15.5	8	230	220	5.2	55
15...	--	1.8	7.3	26.8	18.0	10	330	310	4.1	73
24...	--	--	7.6	23.9	12.2	16	240	210	3.5	61
29...	1230	--	7.2	21.5	15.0	23	220	190	6.2	58
31... a	1230	5.2	7.5	--	10.3	15	230	200	--	--
NOV										
06...	1130	--	7.2	12.8	18.7	22	250	220	4.1	65
13...	1130	--	7.0	2.0	7.7	24	120	96	4.2	27
20...	1100	14	7.1	13.8	11.5	21	210	180	8.4	54
DEC										
04...	1130	14	6.7	8.1	6.1	13	180	150	7.9	45
10...	1130	13	6.9	1.5	3.7	13	200	170	13	50
15...	1045	17	7.1	15.0	11.0	22	220	190	10	60
JAN										
09...	1000	28	6.7	13.5	0.0	8	190	170	12	43
14...	0930	51	6.8	1.8	3.3	24	110	95	5.5	23
FEB										
04...	0930	15	6.5	4.7	3.0	19	220	200	8.5	51
13...	1030	5.4	7.2	15.1	7.7	18	240	220	5.3	60
25...	0930	9.1	7.1	14.2	5.6	10	190	170	6.3	46
MAR										
03...	0945	--	7.2	22.1	11.6	45	280	260	5.9	71
12...	1015	13	7.4	13.0	9.0	48	180	140	3.1	44
17...	1030	6.5	7.2	3.1	3.1	22	280	260	3.4	52
31...	1015	55	7.3	17.2	12.5	75	300	270	3.2	77
APR										
07...	0945	9.9	7.7	22.0	9.1	62	270	240	6.4	65
14...	1000	2.6	6.7	23.0	10.5	54	310	290	5.7	76
23...	1045	2.4	7.0	26.3	15.2	42	300	290	6.5	74
30...	1000	2.2	7.6	18.2	10.0	27	310	290	6.8	76
MAY										
07...	1030	4.2	7.3	17.0	14.4	130	260	230	4.8	64
21...	0945	5.4	7.6	20.0	11.5	80	250	220	3.2	52
JUN										
04...	0945	9.1	7.3	21.2	15.5	25	190	160	2.6	44
10...	0915	2.2	7.3	18.9	14.1	28	340	320	--	85
26...	0930	2.6	7.6	23.2	18.4	320	290	260	--	78
JUL										
07...	0945	5.4	7.4	17.6	15.1	32	240	210	--	58
14...	1000	2.0	7.5	25.5	16.0	44	340	290	--	86
21...	0915	1.8	7.5	22.7	18.1	24	350	310	--	88
29...	0930	1.3	7.0	25.7	20.0	32	440	420	--	108
AUG										
07...	1100	1.7	7.3	19.2	19.0	23	350	320	--	88
12...	1045	1.1	7.0	30.0	18.9	45	490	470	--	127
19...	1045	.97	6.5	27.0	16.8	150	510	--	--	130
30...	0915	1.2	6.1	15.2	15.9	34	440	430	--	119
SEP										
09...	1130	.88	6.0	27.0	18.4	42	560	550	--	143
16...	1015	.88	6.3	22.2	14.3	95	540	530	--	137
22...	1100	.80	6.4	19.0	11.8	47	540	530	--	140
29...	1030	1.3	6.5	20.0	16.0	15	380	360	--	98

a Sample collected and analyzed by the U.S. Geological Survey.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
10...	55	22	22	13	11	3.1	320	2.9	508	ND
15...	73	35	35	25	21	2.0	500	4.0	700	<1
24...	61	20	20	39	32	1.5	460	4.2	598	<1
29...	58	18	18	42	34	3.4	330	2.9	526	<1
31...	57	--	22	38	31	1.9	250	1.1	--	0
NOV										
06...	65	20	20	38	31	3.7	420	--	616	--
13...	27	13	13	29	24	4.1	160	13	246	--
20...	54	18	18	37	30	4.2	300	--	454	--
DEC										
04...	45	16	16	32	26	9.1	260	--	256	--
10...	50	17	17	33	27	5.5	280	--	446	--
15...	60	18	18	33	27	3.9	220	--	466	--
JAN										
09...	48	16	17	27	22	8.6	250	.9	356	ND
14...	26	11	11	18	15	4.6	140	1.6	310	ND
FEB										
04...	53	21	21	25	21	13	275	1.9	464	ND
13...	58	24	23	24	20	2.4	325	5.9	304	ND
25...	45	19	19	25	21	3.2	245	4.0	444	ND
MAR										
03...	69	28	27	24	20	2.4	375	3.4	580	<1
12...	42	18	17	46	38	2.9	240	4.0	684	ND
17...	77	22	22	25	21	2.5	285	2.7	436	<1
31...	76	22	26	42	34	3.4	550	3.4	1036	<1
APR										
07...	66	26	26	33	27	1.1	390	1.6	714	<1
14...	75	30	30	25	21	8.0	435	2.7	172	<1
23...	74	30	28	18	15	2.9	410	1.9	676	4
30...	76	31	30	20	16	.8	450	1.6	772	1
MAY										
07...	66	22	22	37	30	3.0	285	2.0	640	<1
21...	64	21	21	32	26	1.3	350	1.8	596	<1
JUN										
04...	46	18	18	33	27	2.6	260	.4	504	ND
10...	86	31	31	31	25	2.5	500	.7	840	ND
26...	71	27	27	42	34	1.7	375	.5	844	ND
JUL										
07...	61	22	22	41	34	2.6	325	.5	628	ND
14...	83	31	31	58	48	2.9	500	.3	876	ND
21...	88	33	32	46	38	2.3	500	.3	928	ND
29...	106	43	42	31	25	5.0	700	.6	1164	<1
AUG										
07...	89	32	32	39	32	3.1	475	.4	848	<1
12...	124	47	45	30	25	4.8	750	.8	1244	<1
19...	129	49	46	--	--	--	750	.6	1248	<1
30...	111	42	39	18	15	23	750	.8	1360	<1
SEP										
09...	139	57	52	8	7	13	1000	.6	1436	--
16...	136	51	48	14	11	11	875	.7	1100	--
22...	139	47	47	13	11	8.3	870	1.5	1460	--
29...	97	34	33	30	25	15	475	.8	856	--

ND--Material specifically analyzed for but not detected.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT									
10...	<1	ND	1	--	--	6	10	15	4600
15...	6	1	6	--	--	7	8	11	2800
24...	ND	1	ND	--	--	7	7	6	6100
29...	ND	1	ND	--	--	6	12	5	7000
31...	--	0	--	<10	--	3	0	--	3700
NOV									
06...	--	--	--	--	--	7	8	13	6300
13...	--	--	--	--	--	4	14	5	900
20...	--	--	--	--	--	--	6	4	6400
DEC									
04...	--	--	--	--	--	--	6	5	5000
10...	--	--	--	--	--	--	7	6	4600
15...	--	--	--	--	--	--	9	7	7900
JAN									
09...	ND	ND	ND	--	--	8	2	2	4600
14...	ND	ND	ND	--	--	8	2	1	3700
FEB									
04...	ND	ND	ND	--	--	10	1	1	2900
13...	ND	ND	ND	--	--	9	1	1	4100
25...	ND	ND	ND	--	--	8	<1	<1	3700
MAR									
03...	ND	<1	ND	--	--	11	1	1	6200
12...	ND	ND	ND	--	--	8	1	1	6600
17...	ND	<1	ND	--	--	9	1	2	6200
31...	ND	<1	ND	--	--	11	2	1	6600
APR									
07...	ND	<1	ND	--	--	10	2	3	10200
14...	ND	<1	ND	--	--	7	1	1	12200
23...	ND	4	ND	--	--	9	<1	<1	11400
30...	<1	1	<1	--	--	9	--	3	13400
MAY									
07...	ND	<1	ND	--	--	8	8	7	9000
21...	<1	<1	ND	--	--	7	6	4	8600
JUN									
04...	ND	ND	ND	--	--	7	3	3	7000
10...	ND	ND	<1	--	--	10	3	5	13800
26...	ND	ND	<1	--	--	12	9	21	12600
JUL									
07...	ND	<1	ND	--	--	6	11	5	9000
14...	ND	ND	ND	--	--	9	3	3	12600
21...	ND	ND	ND	--	--	9	3	2	8600
29...	<1	<1	<1	--	--	13	6	2	15300
AUG									
07...	<1	<1	<1	--	--	6	5	2	6380
12...	<1	ND	ND	--	--	12	2	--	13800
19...	<1	ND	ND	--	--	12	5	3	--
30...	<1	ND	ND	--	--	16	2	4	9500
SEP									
09...	--	ND	--	--	--	16	3	3	--
16...	--	ND	10	--	--	10	5	3	--
22...	--	ND	10	--	--	11	5	14	10240
29...	--	ND	6	--	--	5	2	4	5100

ND--Material specifically analyzed for but not detected.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
10...	2000	--	--	800	900	--	--	--	--
15...	1100	--	--	1300	1200	--	--	--	--
24...	105	--	--	1000	900	--	--	--	--
29...	41	--	--	800	800	--	--	--	--
31...	60	0	--	670	--	19	--	20	--
NOV									
06...	89	--	--	700	700	--	--	--	--
13...	150	--	--	50	400	--	--	--	--
20...	61	--	--	800	800	--	--	--	--
DEC									
04...	500	--	--	700	600	--	--	--	--
10...	300	--	--	800	800	--	--	--	--
15...	81	--	--	800	800	--	--	--	--
JAN									
09...	2200	ND	--	770	770	20	24	37	29
14...	700	<1	--	690	450	--	11	29	15
FEB									
04...	1900	ND	--	900	900	20	--	37	26
13...	900	ND	--	960	940	24	21	37	22
25...	1000	ND	--	750	740	16	16	26	43
MAR									
03...	300	ND	--	1040	1000	30	29	47	18
12...	200	<1	--	690	640	17	12	29	7
17...	1800	1	--	840	800	17	16	33	18
31...	600	<1	--	1060	970	17	14	37	11
APR									
07...	200	ND	--	1000	890	25	17	33	15
14...	ND	ND	--	1040	1000	27	--	37	11
23...	--	ND	--	1170	1040	26	20	33	11
30...	300	ND	--	1190	1140	22	20	37	18
MAY									
07...	ND	ND	--	790	800	9	24	37	11
21...	ND	ND	--	790	770	11	12	66	33
JUN									
04...	ND	<1	--	670	620	67	8	26	ND
10...	ND	<1	--	1220	1140	18	16	29	ND
26...	ND	<1	--	1220	1070	17	5	43	11
JUL									
07...	ND	ND	--	990	740	16	7	26	11
14...	ND	ND	--	1260	1140	11	11	26	ND
21...	ND	<1	--	1190	1140	12	9	26	ND
29...	ND	ND	--	1650	1540	22	18	41	7
AUG									
07...	70	ND	--	1110	1200	9	9	7	18
12...	100	ND	--	1820	1700	29	18	41	15
19...	90	ND	--	1850	1750	34	20	37	15
30...	150	ND	--	1900	1800	20	17	29	15
SEP									
09...	740	ND	--	2400	2120	36	28	75	50
16...	580	ND	--	2300	2220	25	25	55	45
22...	1250	ND	--	2300	2470	28	28	45	30
29...	100	ND	--	1240	1200	12	9	30	15

ND--Material specifically analyzed for but not detected.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
13...	1030	1.5	7.3	14.0	10.0	20	320	300	--	80
27...	1015	22	6.7	4.0	6.0	12	200	170	--	50
NOV										
03...	1015	18	7.3	11.0	8.0	10	220	190	--	54
16...	1015	1.8	7.4	4.0	2.0	22	310	270	--	78
23...	1015	1.4	6.2	--	--	36	360	330	--	92
DEC										
16...	1545	7.7	7.7	8.0	6.0	12	200	170	--	51
20...	1530	9.9	7.5	.0	5.0	15	200	140	--	50
FEB										
05...	1530	--	7.1	.0	1.0	11	270	240	--	70
12...	1730	34	7.4	7.0	.0	125	160	130	--	37
24...	1740	50	7.3	13.0	6.0	47	110	87	--	26
MAR										
04...	1840	26	7.4	--	--	29	140	120	--	32
22...	1650	5.0	7.4	5.0	6.0	12	170	140	--	42
30...	1430	34	7.2	25.0	16.0	30	110	85	--	23
MAY										
03...	1540	18	7.8	22.0	16.0	110	180	140	--	42
31...	1515	1.7	7.5	28.0	23.0	56	410	380	--	110
JUN										
22...	1625	4.2	7.3	29.0	23.0	22	310	290	--	74
JUL										
09...	1500	3.2	7.3	30.0	24.0	21	390	370	--	96
24...	1500	2.0	7.0	28.0	23.0	4	520	500	--	128
26...	1430	3.8	7.3	29.0	24.0	24	350	310	--	87
AUG										
09...	1745	2.6	7.2	27.0	25.0	26	440	420	--	114
25...	1710	2.9	7.1	30.0	25.0	6	360	330	--	90
SEP										
23...	1600	9.9	7.2	27.0	21.0	25	330	300	--	79

DATE	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
13...	82	28	28	31	25	2.5	415	.8	724	--
27...	51	17	17	32	26	10	260	--	424	--
NOV										
03...	56	19	19	38	31	3.0	280	.9	428	--
16...	80	27	27	48	39	3.1	350	.9	684	--
23...	92	31	30	41	34	41	550	1.0	848	--
DEC										
16...	51	18	18	34	28	1.1	275	2.3	424	--
20...	50	18	18	71	58	3.6	250	.8	440	--
FEB										
05...	69	25	24	34	28	4.3	390	.1	624	--
12...	39	14	14	34	28	2.2	175	.4	512	--
24...	27	10	10	28	23	2.0	95	1.4	336	--
MAR										
04...	34	12	12	30	25	1.9	125	1.4	288	--
22...	38	18	17	38	31	2.3	225	.9	448	--
30...	25	10	10	31	25	2.8	140	3.2	328	--
MAY										
03...	43	17	17	49	40	1.2	170	2.2	523	--
31...	100	40	38	41	34	1.8	495	3.0	1092	--
JUN										
22...	75	31	29	20	16	1.6	390	1.1	708	--
JUL										
09...	94	38	37	28	23	2.2	450	1.4	964	--
24...	127	48	48	25	21	4.0	500	2.0	1332	--
26...	86	33	32	47	39	3.8	375	1.4	--	--
AUG										
09...	107	42	41	26	21	2.3	445	2.2	1176	--
25...	88	33	33	41	34	5.2	355	1.3	860	--
SEP										
23...	82	30	30	42	34	4.2	300	.8	768	--

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT									
13...	--	ND	6	--	--	6	4	4	6350
27...	--	ND	4	--	--	5	16	2	4300
NOV									
03...	--	ND	3	--	--	4	4	3	4160
16...	--	ND	5	--	--	6	5	5	6250
23...	--	<1	--	--	--	11	7	5	--
DEC									
16...	--	<1	ND	--	9	6	4	2	4600
20...	--	<1	ND	--	--	7	3	2	5600
FEB									
05...	--	<1	ND	--	--	7	35	--	4600
12...	--	<1	ND	--	--	16	7	2	11200
24...	--	<1	ND	--	--	4	3	2	3400
MAR									
04...	--	<1	ND	--	--	5	3	<1	3200
22...	--	<1	ND	--	--	5	5	<1	3800
30...	--	<1	ND	--	--	5	2	2	3000
MAY									
03...	--	<1	ND	--	--	11	5	1	7400
31...	--	<1	ND	--	--	8	3	5	11800
JUN									
22...	--	<1	ND	--	--	6	2	2	5600
JUL									
09...	--	<1	ND	--	--	6	1	1	8500
24...	--	<1	ND	--	--	8	1	1	3200
26...	--	<1	ND	--	--	5	1	1	5000
AUG									
09...	--	ND	ND	--	--	7	1	1	5800
25...	--	ND	ND	--	--	--	2	2	1100
SEP									
23...	--	ND	ND	--	--	--	1	ND	6800

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
13...	260	ND	--	1100	1100	11	13	35	50
27...	490	ND	--	630	580	8	8	22	22
NOV									
03...	180	ND	--	630	580	9	3	25	35
16...	240	ND	--	980	950	11	12	48	35
23...	600	ND	--	1160	1140	14	18	60	ND
DEC									
16...	200	ND	--	660	630	9	8	35	15
20...	ND	ND	--	660	610	9	3	30	25
FEB									
05...	800	<1	ND	850	820	13	14	30	170
12...	ND	ND	ND	600	400	7	25	50	10
24...	100	ND	ND	280	230	3	7	20	10
MAR									
04...	ND	ND	ND	360	320	8	11	20	10
22...	200	ND	ND	520	500	12	12	12	10
30...	ND	ND	ND	300	240	5	9	5	9
MAY									
03...	ND	<1	ND	580	500	5	16	40	ND
31...	ND	ND	ND	1270	1150	17	19	30	20
JUN									
22...	200	ND	ND	860	820	10	13	20	20
JUL									
09...	100	ND	ND	1090	1020	11	16	20	10
24...	100	ND	ND	1570	1520	23	22	30	20
26...	100	ND	ND	960	900	8	11	30	20
AUG									
09...	100	ND	ND	1340	1300	29	18	20	20
25...	100	ND	ND	730	700	10	10	20	20
SEP									
23...	100	ND	ND	850	830	20	12	20	10

ND--Material specifically analyzed for but not detected.

03407874 GREEN BRANCH NEAR HEMBREE, TN

LOCATION.--Lat 36°12'09", long 84°24'59", Scott County, Hydrologic Unit 05130104, 1.9 mi (3.1 km) south of Hembree, 4.0 mi (6.4 km) northeast of Braytown, and 4.7 mi (7.6 km) east of Charleys Branch.

DRAINAGE AREA.--1.38 mi^2 (3.57 km^2).

PERIOD OF RECORD.--December 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
FEB										
03...	--	--	7.1	10.0	8.2	1000	--	--	2.8	8.9
07...	--	--	7.1	1.0	4.2	110	--	--	2.6	15
14...	--	--	7.0	13.4	7.8	1000	--	--	2.8	14
19...	1445	--	7.0	3.1	6.5	1000	--	--	2.7	6.4
26...	--	--	7.1	13.9	7.0	35	72	48	2.5	14
MAR										
05...	--	--	7.2	17.1	19.5	0	110	87	2.6	23
19...	--	--	7.0	8.6	8.0	1000	81	63	2.8	12
28...	--	--	7.1	22.1	15.0	350	85	60	3.1	15
APR										
03...	--	--	7.1	5.2	9.3	2	68	47	4.7	16
08...	--	--	7.1	16.1	9.3	0	100	70	3.1	22
17...	--	--	7.3	23.3	13.8	0	100	73	2.4	21
24...	--	--	7.1	22.0	16.1	12	89	64	3.0	18
MAY										
01...	--	--	7.1	20.2	18.1	0	100	72	2.4	21
13...	--	--	7.1	24.1	18.0	0	130	100	2.3	28
22...	--	--	7.1	30.1	20.5	1000	130	100	3.0	13
29...	--	--	7.2	27.0	19.5	200	130	99	12	20
JUN										
07...	--	--	7.3	27.0	21.7	31	160	120	2.8	32
16...	--	--	7.2	27.2	21.4	1000	110	80	3.4	8.0
25...	--	--	7.1	29.0	22.1	1000	160	130	3.4	25
JUL										
02...	--	--	7.2	28.1	22.9	2	180	150	2.7	40
09...	--	--	7.5	29.1	23.0	7	160	130	3.1	36
16...	--	--	7.4	28.2	22.0	6	180	150	2.9	41
26...	--	--	7.3	28.4	21.6	12	110	78	2.8	33
31...	--	--	7.3	28.0	21.9	0	200	170	2.9	47
AUG										
10...	--	--	7.3	28.1	20.8	1000	180	150	3.1	31
13...	--	--	7.2	29.5	22.1	0	230	200	2.8	50
20...	--	--	7.2	29.4	22.3	1	220	190	2.8	50
28...	--	--	7.2	30.9	24.0	0	220	190	2.9	50
SEP										
05...	--	--	7.3	30.8	22.9	1	200	170	4.6	46
10...	--	--	7.2	23.5	18.7	0	220	190	5.0	53
17...	--	--	7.2	18.4	16.0	10	260	230	3.9	57
24...	--	--	6.7	18.7	14.8	310	190	160	4.8	25

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)
FEB									
03...	--	6.1	--	26	21	3.1	80	4.7	2850
07...	--	8.0	--	29	24	3.7	68	4.5	1075
14...	--	7.7	--	29	24	4.1	95	4.8	7200
19...	--	5.0	--	28	23	4.3	100	4.7	10800
26...	16	6.5	7.9	29	24	3.6	66	4.9	825
MAR									
05...	23	12	12	28	23	2.4	95	5.2	95
19...	17	8.4	9.4	22	18	2.9	135	5.0	16490
28...	18	9.5	9.8	31	25	3.9	75	4.8	810
APR									
03...	14	9.3	8.1	26	21	2.9	85	4.8	190
08...	22	12	12	36	30	4.6	90	5.0	170
17...	21	12	12	33	27	2.6	88	4.7	1800
24...	19	11	10	30	25	3.3	77	5.0	2100
MAY									
01...	21	12	12	34	28	3.6	85	4.5	1500
13...	28	15	15	34	28	4.1	120	5.1	1700
22...	27	16	14	34	28	3.9	105	4.6	21000
29...	27	16	15	38	31	3.8	115	4.8	2200
JUN									
07...	35	18	18	46	38	3.6	130	4.9	2800
16...	25	15	12	37	30	3.3	86	5.0	33500
25...	36	18	18	38	31	3.9	140	4.9	8400
JUL									
02...	40	21	20	39	32	3.5	175	4.9	3400
09...	37	19	17	43	35	1.8	175	5.7	2800
16...	41	19	19	40	33	2.5	160	5.2	3500
26...	26	15	11	39	32	2.9	165	4.8	2000
31...	47	21	21	40	33	2.6	205	5.1	4000
AUG									
10...	43	18	18	38	31	2.5	195	5.0	14700
13...	52	23	23	39	32	3.5	200	5.1	3900
20...	50	23	22	39	32	3.2	210	4.8	2500
28...	50	22	22	38	31	3.3	205	4.8	1200
SEP									
05...	45	22	21	40	33	3.2	220	6.1	434
10...	51	23	23	38	31	3.3	150	4.0	446
17...	69	20	20	40	33	3.4	105	5.1	1126
24...	43	19	19	35	29	9.1	205	4.2	1452

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
FEB									
03...	<1	--	1	--	--	--	--	6	--
07...	ND	--	ND	--	--	--	25	7	--
14...	--	--	50	--	11	--	50	17	--
19...	20	--	20	--	160	--	--	19	--
26...	--	--	--	--	10	ND	--	4	ND
MAR									
05...	ND	ND	ND	ND	<1	ND	--	4	1
19...	ND	ND	ND	ND	--	--	--	170	7
28...	ND	ND	ND	ND	59	ND	46	69	5
APR									
03...	ND	ND	ND	ND	--	--	--	10	3
08...	ND	ND	ND	ND	--	--	--	<1	3
17...	ND	ND	ND	ND	--	--	--	2	<1
24...	ND	ND	ND	ND	--	--	--	7	3
MAY									
01...	ND	ND	ND	ND	--	--	--	6	1
13...	ND	ND	ND	ND	--	--	--	4	2
22...	<1	ND	1	ND	--	--	--	181	8
29...	ND	ND	ND	ND	--	--	--	12	7
JUN									
07...	ND	ND	ND	ND	--	--	--	11	3
16...	<1	<1	1	1	--	--	--	335	7
25...	ND	ND	ND	ND	--	--	--	66	6
JUL									
02...	ND	ND	ND	ND	--	--	--	4	4
09...	<1	ND	1	ND	--	--	--	9	3
16...	ND	ND	ND	ND	--	--	--	6	4
26...	ND	ND	ND	ND	--	--	--	9	5
31...	ND	ND	ND	ND	--	--	--	8	8
AUG									
10...	ND	ND	ND	ND	--	--	--	14	10
13...	ND	ND	ND	ND	--	--	--	9	8
20...	ND	ND	ND	ND	--	--	--	8	5
28...	ND	ND	ND	ND	--	--	--	8	4
SEP									
05...	ND	ND	ND	ND	--	--	--	5	6
10...	ND	ND	ND	ND	--	--	--	6	5
17...	ND	2	ND	2	--	--	32	10	7
24...	ND	ND	ND	ND	--	--	8	112	9

ND--Material specifically analyzed for but not detected.

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
FEB									
03...	16000	50	--	320	--	142	--	160	--
07...	3900	3	--	40	--	28	--	20	--
14...	11300	10	--	110	--	50	--	50	--
19...	41000	7	--	610	--	200	--	500	--
26...	1100	ND	ND	30	130	28	6	12	ND
MAR									
05...	80	ND	ND	20	160	ND	ND	ND	ND
19...	12000	28	ND	150	270	120	ND	130	ND
28...	11800	6	ND	160	170	46	12	50	ND
APR									
03...	230	ND	ND	ND	60	ND	ND	ND	ND
08...	ND	ND	ND	ND	250	12	ND	ND	ND
17...	130	ND	ND	140	180	ND	ND	10	ND
24...	2000	ND	ND	210	150	12	6	10	ND
MAY									
01...	1200	ND	ND	180	140	12	4	10	ND
13...	300	ND	ND	190	170	9	ND	6	ND
22...	27000	55	ND	1000	20	118	ND	210	ND
29...	7000	5	ND	430	220	28	ND	50	ND
JUN									
07...	2000	ND	ND	310	220	8	ND	20	10
16...	49000	6	ND	1100	200	240	ND	340	20
25...	11000	6	ND	570	ND	--	--	80	ND
JUL									
02...	700	--	--	300	280	--	--	8	ND
09...	600	--	--	270	230	--	--	10	ND
16...	300	--	--	270	250	--	--	10	ND
26...	300	--	--	210	ND	--	--	10	ND
31...	400	--	--	440	420	--	--	10	ND
AUG									
10...	16000	--	--	800	ND	--	--	150	ND
13...	500	--	--	510	460	--	--	8	ND
20...	800	--	--	490	180	--	--	8	ND
28...	500	--	--	560	520	--	--	4	ND
SEP									
05...	200	--	--	590	460	--	--	4	ND
10...	200	--	--	600	590	--	--	4	ND
17...	19000	--	--	1000	20	--	--	80	ND
24...	33000	--	--	800	200	--	--	110	20

ND--Material specifically analyzed for but not detected.

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
10...	--	--	6.6	24.1	16.0	20	200	170	3.9	49
15...	--	--	7.1	26.0	17.9	7	110	78	4.2	55
24...	--	--	7.4	24.0	13.8	3	--	--	2.9	50
29...	1550	--	7.5	18.8	15.2	750	200	170	4.2	32
NOV										
06...	1230	--	7.4	19.0	14.1	0	190	160	3.9	45
13...	1400	--	6.4	2.1	7.5	320	140	110	6.2	24
20...	1145	--	7.1	15.2	11.4	22	170	140	4.3	38
25...a	0930	1.3	6.4	--	5.4	7	190	170	--	--
DEC										
04...	1400	1.8	6.9	10.9	7.7	150	150	120	5.4	26
10...	1300	1.8	6.8	1.3	4.3	7	150	120	11	32
15...	1215	1.1	7.1	15.8	11.7	8	150	120	10	35
17...a	0930	3.5	8.0	--	5.0	20	130	100	--	--
JAN										
09...	1145	2.7	7.1	-8.3	.0	16	160	130	7.3	35
14...	1100	7.8	6.6	2.2	3.5	120	110	88	5.2	18
FEB										
04...	1130	2.1	6.7	11.3	5.0	8	160	130	3.9	41
13...	1200	1.4	7.5	17.8	9.7	2	170	140	5.6	41
25...	1100	2.7	7.2	15.3	7.6	3	150	120	3.3	34
MAR										
03...	1115	1.3	7.5	22.0	13.0	3	170	140	3.3	40
12...	1145	3.8	7.4	14.0	9.7	--	140	110	6.8	17
17...	1145	1.9	7.4	4.2	5.5	8	150	120	1.9	39
31...	1145	7.8	7.3	9.0	11.0	600	120	98	2.2	22
APR										
07...	1130	1.5	7.6	20.9	12.3	10	170	130	5.2	42
14...	1130	.76	7.2	25.2	14.2	33	180	150	4.3	41
23...	1145	.55	7.4	28.0	17.3	3	170	140	2.0	37
30...	1045	.48	7.6	20.5	11.9	1	180	150	2.4	40
MAY										
07...	1200	.76	7.4	21.0	14.8	6	170	140	4.0	37
21...	1030	3.8	7.8	20.0	13.0	12	130	94	2.0	30
JUN										
04...	1030	1.9	7.4	23.0	16.4	7	140	110	2.4	30
10...	1000	.61	7.5	22.0	15.2	1	160	120	--	35
26...	1030	3.0	7.3	23.0	18.2	16	150	120	--	34
JUL										
07...	1045	4.7	7.0	18.2	15.7	3	100	73	--	22
14...	1100	.93	7.4	23.0	17.4	3	150	120	--	32
21...	1015	.48	7.7	23.6	18.8	8	180	140	--	38
29...	1130	.48	7.0	25.5	20.7	0	180	150	--	37
AUG										
07...	1230	.37	7.1	22.1	19.0	13	180	150	--	39
12...	1215	.27	7.0	26.5	20.2	2	200	180	--	40
19...	1230	.10	7.1	25.0	19.4	2	200	170	--	48
30...	1045	.61	6.8	19.0	17.0	58	220	190	--	49
SEP										
09...	1300	.27	6.7	24.1	19.2	12	240	210	--	55
16...	1145	.27	6.9	19.4	16.2	4	230	200	--	56
22...	1215	.16	6.7	15.3	13.5	2	240	210	--	55
29...	1200	.32	6.7	20.0	17.0	5	230	200	--	56

a Sample collected and analyzed by the U.S. Geological Survey.

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)
OCT									
10...	49	19	19	33	27	11	210	3.0	488
15...	7.5	23	23	39	32	4.8	210	6.1	416
24...	50	--	--	42	34	2.2	150	4.3	408
29...	50	19	19	41	34	1.9	155	3.0	1688
NOV									
06...	45	18	18	40	33	2.4	150	--	324
13...	24	18	18	32	26	19	45	15	618
20...	38	18	18	39	32	5.0	100	--	300
25...	49	--	16	20	16	13	130	1.0	--
DEC									
04...	34	16	16	38	31	7.7	57	--	454
10...	32	16	16	38	31	9.2	140	--	304
15...	35	15	15	39	32	4.4	125	--	246
17...	32	--	13	35	29	.6	100	.8	--
JAN									
09...	39	15	15	36	30	4.6	100	1.1	288
14...	27	10	11	27	22	11	47	1.5	394
FEB									
04...	38	15	15	39	32	12	62	1.7	--
13...	40	16	16	39	32	2.0	110	4.7	316
25...	36	13	14	38	31	3.8	100	4.7	248
MAR									
03...	40	16	16	37	30	1.9	135	2.6	172
12...	35	12	12	40	33	2.5	100	2.6	316
17...	38	14	14	35	29	2.2	115	3.2	218
31...	30	11	11	27	22	2.2	85	2.2	576
APR									
07...	42	15	15	47	39	1.9	95	4.0	298
14...	44	18	18	40	33	4.0	120	2.3	234
23...	37	19	19	34	28	2.2	160	1.5	256
30...	40	20	20	40	33	1.6	180	1.7	596
MAY									
07...	37	18	18	43	35	2.7	130	1.8	328
21...	30	14	14	44	36	1.1	110	1.3	276
JUN									
04...	30	15	15	41	34	2.6	130	.4	276
10...	34	19	19	45	37	2.3	200	.5	352
26...	32	18	18	39	32	3.1	180	.5	344
JUL									
07...	22	12	12	33	27	5.3	110	.4	268
14...	32	18	18	38	31	2.4	180	.2	296
21...	39	21	21	47	39	1.5	210	.2	364
29...	37	21	21	41	34	6.6	200	.4	340
AUG									
07...	39	21	21	43	35	5.5	210	.4	404
12...	40	22	23	23	19	3.7	225	.4	392
19...	45	22	22	39	32	5.0	225	.4	400
30...	50	23	22	39	32	9.9	270	.5	496
SEP									
09...	55	25	24	43	35	14	285	.6	460
16...	53	24	23	42	34	8.5	245	.4	440
22...	55	25	24	42	34	13	220	1.0	436
29...	55	25	23	42	34	13	250	.6	408

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
OCT									
10...	ND	ND	ND	ND	--	--	10	12	5
15...	ND	ND	ND	ND	--	--	8	--	--
24...	ND	ND	ND	ND	--	--	7	4	4
29...	ND	ND	ND	ND	--	--	6	133	9
NOV									
06...	--	--	--	--	--	--	7	7	7
13...	--	--	--	--	--	--	4	50	12
20...	--	--	--	--	--	--	6	13	5
25...	--	--	--	--	--	--	--	--	--
DEC									
04...	--	--	--	--	--	--	6	21	12
10...	--	--	--	--	--	--	7	9	7
15...	--	--	--	--	--	--	9	7	6
17...	--	--	--	--	--	--	--	--	--
JAN									
09...	ND	ND	ND	ND	<1	--	ND	2	4
14...	ND	ND	ND	ND	ND	--	ND	3	3
FEB									
04...	ND	ND	ND	ND	ND	--	ND	1	<1
13...	ND	ND	ND	ND	ND	--	ND	1	1
25...	ND	ND	ND	ND	ND	--	ND	1	1
MAR									
03...	ND	ND	ND	ND	ND	--	ND	1	2
12...	ND	ND	ND	ND	146	--	ND	--	1
17...	ND	ND	ND	ND	73	--	ND	3	5
31...	ND	ND	ND	ND	3	--	ND	8	2
APR									
07...	ND	ND	ND	ND	1	--	ND	1	2
14...	ND	ND	ND	ND	ND	--	ND	<1	1
23...	ND	ND	ND	ND	ND	--	ND	1	1
30...	ND	ND	ND	ND	ND	--	ND	<1	2
MAY									
07...	ND	ND	ND	ND	ND	--	ND	1	1
21...	ND	ND	ND	ND	<1	--	ND	1	<1
JUN									
04...	ND	ND	ND	ND	<1	--	ND	1	<1
10...	ND	ND	ND	ND	ND	--	ND	1	1
26...	ND	ND	ND	ND	3	--	ND	1	<1
JUL									
07...	ND	ND	ND	ND	2	--	ND	1	<1
14...	ND	ND	ND	ND	ND	--	ND	1	<1
21...	ND	ND	ND	ND	ND	--	ND	<1	<1
29...	ND	ND	ND	ND	ND	--	ND	--	--
AUG									
07...	ND	ND	ND	ND	1	--	ND	6	--
12...	ND	ND	ND	ND	ND	--	ND	2	--
19...	ND	ND	ND	ND	ND	--	ND	ND	--
30...	ND	ND	ND	ND	ND	--	ND	--	--
SEP									
09...	ND	ND	ND	ND	ND	--	ND	--	--
16...	ND	ND	ND	ND	ND	--	ND	2	--
22...	ND	ND	ND	ND	ND	--	ND	14	--
29...	ND	ND	ND	ND	ND	--	ND	5	--

ND--Material specifically analyzed for but not detected.

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
10...	4300	--	--	800	20	--	--	ND	ND
15...	250	--	--	300	300	--	--	ND	ND
24...	400	--	--	200	200	--	--	ND	ND
29...	330	--	--	1000	300	--	--	--	--
NOV									
06...	250	--	--	200	200	--	--	--	--
13...	5100	--	--	100	250	--	--	--	--
20...	2500	--	--	300	250	--	--	--	--
25...	890	--	--	280	--	6	--	--	--
DEC									
04...	5800	--	--	300	250	--	--	--	--
10...	1300	--	--	300	300	--	--	--	--
15...	1000	--	--	300	300	--	--	--	--
17...	1300	--	--	200	--	4	--	--	--
JAN									
09...	1600	ND	--	290	290	5	4	ND	ND
14...	4800	3	--	360	220	11	5	42	25
FEB									
04...	900	ND	--	340	270	5	3	ND	ND
13...	300	ND	--	270	250	3	3	ND	ND
25...	400	ND	--	220	200	4	2	ND	ND
MAR									
03...	200	ND	--	220	220	2	2	ND	ND
12...	16000	2	--	500	200	28	2	105	20
17...	600	1	--	250	250	3	3	22	ND
31...	4500	1	--	430	290	31	4	72	30
APR									
07...	700	ND	--	270	250	5	3	ND	ND
14...	400	ND	--	250	250	3	2	ND	ND
23...	300	ND	--	240	250	ND	ND	ND	ND
30...	300	ND	--	290	290	ND	ND	ND	ND
MAY									
07...	800	ND	--	200	200	<1	<1	ND	ND
21...	1000	ND	--	180	170	<1	<1	ND	ND
JUN									
04...	1500	ND	--	170	150	<1	<1	30	22
10...	500	ND	--	220	220	<1	<1	ND	ND
26...	1400	ND	--	200	220	<1	<1	ND	ND
JUL									
07...	1300	ND	--	150	130	<1	<1	ND	ND
14...	840	ND	--	240	220	<1	<1	ND	ND
21...	900	ND	--	300	290	<1	<1	112	ND
29...	330	ND	--	340	340	ND	1	ND	ND
AUG									
07...	1550	ND	--	380	360	<1	<1	ND	ND
12...	520	ND	--	370	370	<1	<1	ND	ND
19...	670	ND	--	410	400	1	3	ND	ND
30...	3210	ND	--	400	400	2	1	40	ND
SEP									
09...	1250	ND	--	500	460	1	1	ND	ND
16...	540	ND	--	450	430	1	1	ND	ND
22...	370	ND	--	530	530	1	6	ND	ND
29...	580	ND	--	350	330	1	1	ND	ND

ND--Material specifically analyzed for but not detected.

CUMBERLAND RIVER BASIN

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
13...	1200	.48	7.4	20.0	13.0	4	230	190	--	54
27...	1145	3.4	7.0	7.0	7.0	10	150	120	--	34
NOV										
03...	1145	1.8	7.3	13.0	9.0	5	160	120	--	37
16...	1130	.55	7.3	--	--	1	210	170	--	48
23...	--	.00	6.9	--	--	1	200	170	--	45
DEC										
16...	1330	2.5	7.2	8.0	5.0	6	150	120	--	33
20...	1315	3.4	7.4	.0	6.0	125	150	110	--	33
FEB										
05...	1250	.84	7.1	-2.0	1.0	0	160	140	--	37
12...	1445	11	7.1	8.0	.0	280	89	70	--	20
24...	1430	11	7.2	14.0	6.0	215	68	51	--	14
MAR										
04...	1505	10	7.5	--	--	170	110	89	--	20
22...	1335	8.9	7.3	5.0	5.0	5	130	100	--	28
30...	1130	14	7.3	23.0	17.0	71	120	94	--	23
APR										
23...	1210	13	7.3	19.0	15.0	240	140	110	--	21
MAY										
03...	1350	1.6	7.5	18.0	15.0	105	130	92	--	25
31...	1230	--	7.0	26.5	22.0	1	200	170	--	42
JUN										
22...	1330	--	6.7	28.5	23.0	3	190	170	--	40
JUL										
09...	1220	--	7.1	30.0	25.0	0	210	180	--	44
24...	1225	--	6.8	27.0	23.0	0	200	170	--	32
26...	1130	--	7.1	25.0	22.0	28	180	140	--	31
AUG										
09...	1415	--	7.0	28.0	25.0	8	180	150	--	30
25...	1300	--	6.4	26.0	24.0	34	160	130	--	22
SEP										
23...	1305	--	7.1	24.0	19.0	0	160	140	--	24

DATE	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)
OCT									
13...	53	23	22	44	36	2.8	250	.6	408
27...	34	14	14	38	31	6.1	140	--	244
NOV									
03...	37	16	16	46	38	3.7	155	.7	264
16...	47	21	22	45	37	3.6	215	.7	328
23...	46	21	21	39	32	7.9	230	1.3	340
DEC									
16...	33	15	15	40	33	4.0	165	.6	292
20...	36	16	15	46	38	2.9	160	1.2	468
FEB									
05...	36	19	16	28	23	3.6	185	.1	312
12...	20	11	9.5	23	19	2.9	105	.3	2356
24...	15	8.0	7.5	21	17	2.1	95	1.4	832
MAR									
04...	22	12	13	26	21	1.2	85	1.3	696
22...	29	14	14	36	30	2.4	155	1.1	268
30...	26	13	13	32	26	2.6	175	1.2	388
APR									
23...	30	16	15	40	33	3.2	145	1.6	716
MAY									
03...	29	15	15	46	38	2.3	105	1.9	412
31...	39	24	24	42	34	6.7	205	1.9	368
JUN									
22...	39	23	23	20	16	6.4	190	.6	296
JUL									
09...	42	25	25	38	31	4.8	--	1.1	340
24...	33	28	27	37	30	9.4	250	1.2	380
26...	31	24	24	44	36	5.6	215	.7	--
AUG									
09...	29	25	25	36	30	5.8	195	2.1	444
25...	22	26	25	37	30	24	210	.9	524
SEP									
23...	21	26	25	22	18	2.8	180	.5	452

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
OCT									
13...	ND	ND	ND	ND	ND	--	ND	17	--
27...	ND	ND	ND	ND	ND	--	ND	2	--
NOV									
03...	ND	ND	ND	ND	ND	--	ND	31	--
16...	ND	ND	ND	ND	ND	--	ND	4	--
23...	ND	ND	ND	ND	ND	--	<1	16	--
DEC									
16...	ND	ND	ND	ND	ND	--	2	2	--
20...	ND	ND	<1	ND	ND	--	5	5	2
FEB									
05...	--	--	ND	ND	--	--	ND	1	1
12...	--	--	ND	ND	--	--	59	50	6
24...	--	--	ND	ND	--	--	--	15	3
MAR									
04...	--	--	ND	ND	--	--	11	9	2
22...	--	--	2	ND	--	--	--	1	5
30...	--	--	ND	ND	--	--	3	3	3
APR									
23...	--	--	ND	ND	--	--	23	11	2
MAY									
03...	--	--	ND	ND	--	--	--	6	1
31...	--	--	ND	ND	--	--	<1	5	25
JUN									
22...	--	--	<1	ND	--	--	<1	1	3
JUL									
09...	--	--	ND	ND	--	--	--	1	1
24...	--	--	ND	ND	--	--	1	ND	1
26...	--	--	<1	ND	--	--	--	3	1
AUG									
09...	--	--	ND	ND	--	--	2	11	1
25...	--	--	ND	ND	--	--	3	16	1
SEP									
23...	--	--	ND	ND	--	--	1	ND	ND

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
13...	410	ND	--	320	320	1	1	ND	ND
27...	840	ND	--	180	160	2	--	ND	ND
NOV									
03...	440	ND	--	190	190	2	10	ND	ND
16...	230	ND	--	210	190	1	1	ND	ND
23...	290	ND	--	290	290	1	2	35	ND
DEC									
16...	700	ND	--	200	180	2	2	ND	ND
20...	5700	ND	--	260	180	4	2	30	ND
FEB									
05...	--	ND	--	180	170	6	1	ND	ND
12...	33500	40	<1	980	120	--	1	170	20
24...	12200	4	--	400	100	27	1	60	ND
MAR									
04...	9500	3	--	400	180	26	4	60	ND
22...	300	ND	--	120	100	1	1	--	ND
30...	3200	ND	--	170	110	13	4	20	ND
APR									
23...	15000	3	--	660	440	27	2	70	ND
MAY									
03...	5200	1	--	340	280	8	1	30	ND
31...	300	ND	--	280	280	1	1	10	10
JUN									
22...	300	ND	--	200	190	1	1	ND	ND
JUL									
09...	300	ND	--	320	320	3	1	ND	ND
24...	200	ND	--	580	580	1	1	--	--
26...	1800	ND	--	460	410	3	1	--	--
AUG									
09...	800	ND	--	430	410	2	1	ND	ND
25...	2300	ND	--	650	580	4	1	10	10
SEP									
23...	300	ND	--	300	290	ND	6	ND	ND

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN

LOCATION.--Lat 36°12'39", long 84°24'19", Scott County, Hydrologic Unit 05130104, 1.5 mi (2.4 km) southeast of Hembree, 4.1 mi (6.6 km) northeast of Braytown, and 5.1 mi (8.2 km) east of Stainville.

DRAINAGE AREA.--0.67 mi^2 (1.74 km^2).

PERIOD OF RECORD.--February 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
JAN										
07...	--	--	6.0	--	--	0	--	--	2.0	2.2
15...	--	--	6.0	--	3.5	0	--	--	2.3	2.3
22...	--	--	6.2	9.0	5.5	1	--	--	2.4	2.2
27...	1445	--	6.0	19.0	6.5	0	--	--	2.3	2.4
FEB										
03...	--	7.4	7.0	10.0	8.0	2	--	--	2.4	2.3
07...	--	5.6	6.9	-.2	3.8	2	--	--	2.4	2.5
14...	--	5.0	7.0	11.5	6.2	0	--	--	2.5	2.6
19...	1530	--	6.9	3.5	6.9	4	--	--	2.7	2.4
26...	--	3.6	6.9	13.1	6.3	6	13	6	2.9	2.6
MAR										
05...	--	.85	6.4	17.0	6.0	1000	17	6	2.8	6.5
19...	--	--	6.7	8.4	7.5	1	16	9	2.8	3.2
28...	--	1.7	6.8	20.8	13.0	3	11	2	2.8	2.1
APR										
03...	--	1.5	6.7	6.1	8.2	3	16	4	2.8	3.4
08...	--	.76	7.0	16.0	8.6	2	19	8	2.2	4.0
17...	--	--	6.7	23.1	13.0	3	13	2	2.3	2.5
24...	--	.99	6.8	23.0	15.4	59	12	5	2.3	1.6
MAY										
01...	--	.65	6.8	19.3	16.1	2	15	6	2.3	1.9
13...	--	.26	6.8	22.1	18.4	9	18	7	2.8	2.9
22...	--	.75	6.9	30.0	20.0	110	--	--	2.7	--
29...	--	1.5	6.7	26.0	18.0	1000	22	11	2.3	1.4
JUN										
07...	--	.17	6.4	27.2	21.9	35	26	12	2.1	3.4
16...	--	1.4	6.8	28.0	21.5	7	24	9	2.2	3.5
25...	--	.64	6.6	28.3	21.4	125	28	17	2.4	3.6
JUL										
02...	--	.08	6.8	29.1	23.0	17	29	18	2.6	4.6
09...	--	.75	7.1	28.6	21.4	38	24	11	2.2	3.5
16...	--	.25	7.0	28.9	21.6	16	--	--	2.3	4.6
26...	--	.07	6.8	28.5	21.4	25	24	9	2.2	2.9
31...	--	.07	6.8	29.1	22.8	6	32	21	2.6	5.6
AUG										
10...	--	.33	7.4	27.9	20.2	1000	--	--	2.0	9.4
13...	--	.05	6.9	28.8	22.9	2	35	24	2.5	6.4
20...	--	.15	6.9	29.0	23.4	18	43	31	3.2	7.6
28...	--	.03	7.2	30.2	24.4	4	38	22	5.3	6.9
SEP										
05...	--	.01	6.9	31.0	22.9	2	39	23	4.9	7.2
10...	--	.01	6.8	23.1	17.2	2	42	29	6.0	7.7
17...	--	.33	7.0	18.0	16.1	5	76	60	5.2	11
24...	--	3.7	6.7	19.1	15.0	105	36	24	3.6	3.0

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN										
07...	--	1.4	--	10	8	14	12	3.9	45	ND
15...	--	1.5	--	9	7	14	15	4.0	50	ND
22...	--	1.3	--	11	9	11	17	3.8	45	ND
27...	--	1.4	--	8	7	13	14	4.1	70	ND
FEB										
03...	--	1.4	--	9	7	1.3	15	3.7	75	ND
07...	--	1.4	--	9	7	1.6	20	4.1	60	ND
14...	--	1.4	--	10	8	1.6	17	3.9	55	ND
19...	--	1.5	--	9	7	1.8	16	4.2	95	ND
26...	2.6	1.4	1.5	8	7	1.6	21	4.0	10	ND
MAR										
05...	3.7	5.0	2.0	13	11	6.7	20	3.9	18190	7
19...	3.2	2.0	2.0	9	7	2.9	16	3.8	70	ND
28...	2.1	1.4	1.4	11	9	2.7	11	4.3	75	ND
APR										
03...	3.4	2.8	1.9	15	12	4.3	18	4.0	8110	4
08...	4.0	2.3	2.3	14	11	2.2	17	4.4	75	ND
17...	2.6	1.6	1.7	14	11	4.4	12	3.9	700	<1
24...	2.5	2.1	1.5	9	7	2.3	17	3.8	2300	<1
MAY										
01...	2.9	2.2	1.9	11	9	2.7	25	4.0	1600	ND
13...	3.6	2.5	2.3	14	11	3.5	23	3.5	1200	<1
22...	--	2.9	2.7	13	11	2.6	27	3.7	2400	<1
29...	4.3	5.3	2.8	14	11	4.5	22	4.1	15800	<1
JUN										
07...	5.0	3.9	3.2	17	14	9.7	23	4.6	6100	<1
16...	4.5	3.3	3.1	18	15	4.6	29	3.8	2100	ND
25...	5.0	4.2	3.8	14	11	5.5	24	3.7	3400	ND
JUL										
02...	5.5	4.1	3.8	14	11	2.9	31	4.2	2200	ND
09...	4.5	3.4	3.2	16	13	2.0	38	3.6	2300	<1
16...	--	3.8	3.7	14	11	2.2	29	5.3	1200	ND
26...	4.5	2.8	3.0	18	15	3.8	27	4.2	1760	ND
31...	5.9	4.2	4.1	14	11	3.5	36	3.9	1600	ND
AUG										
10...	--	7.5	7.1	17	14	1.0	58	4.2	4400	ND
13...	6.4	4.6	4.5	14	11	2.4	29	3.9	960	ND
20...	7.8	6.0	5.8	15	12	2.5	41	4.0	960	ND
28...	7.0	5.0	5.0	20	16	1.7	37	3.8	760	ND
SEP										
05...	7.4	5.1	4.9	19	16	3.4	30	4.0	194	ND
10...	7.8	5.4	5.4	16	13	3.7	35	3.9	134	ND
17...	14	10	10	20	16	2.9	39	4.2	662	--
24...	5.0	5.7	5.7	15	12	4.3	42	4.3	286	--

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
JAN									
07...	--	ND	--	ND	--	ND	ND	--	50
15...	--	ND	--	ND	--	ND	ND	--	120
22...	--	ND	--	ND	--	ND	ND	--	90
27...	--	ND	--	ND	--	ND	ND	--	130
FEB									
03...	--	ND	--	ND	--	ND	ND	--	40
07...	--	ND	--	ND	--	ND	ND	--	300
14...	--	ND	--	ND	--	ND	ND	--	130
19...	--	ND	--	ND	--	ND	ND	--	40
26...	--	ND	--	ND	ND	--	ND	ND	30
MAR									
05...	ND	7	ND	ND	ND	--	323	10	80000
19...	ND	ND	ND	--	--	--	21	3	1000
28...	ND	ND	ND	5	ND	ND	7	2	350
APR									
03...	ND	4	ND	--	2	--	18	16	50000
08...	ND	ND	ND	11	ND	ND	8	4	180
17...	ND	1	ND	7	ND	ND	9	5	370
24...	ND	ND	ND	25	ND	ND	19	7	4700
MAY									
01...	ND	ND	ND	27	ND	ND	23	5	3000
13...	ND	1	ND	18	ND	ND	22	6	2600
22...	ND	1	ND	65	ND	ND	58	6	5900
29...	ND	1	ND	75	ND	ND	195	5	22000
JUN									
07...	ND	1	ND	14	1	ND	37	6	5000
16...	ND	ND	ND	8	ND	ND	15	3	3000
25...	ND	ND	ND	17	ND	ND	35	8	8000
JUL									
02...	ND	ND	ND	6	ND	ND	15	5	2000
09...	ND	1	ND	10	ND	ND	21	4	3000
16...	<1	ND	1	4	ND	ND	12	6	1000
26...	<1	ND	1	7	<1	ND	14	7	2000
31...	ND	ND	ND	1	<1	ND	10	7	300
AUG									
10...	3	ND	3	17	2	ND	42	13	4000
13...	ND	ND	ND	<1	ND	ND	16	9	500
20...	ND	ND	ND	3	ND	ND	17	5	700
26...	ND	ND	ND	1	ND	ND	13	5	700
SEP									
05...	ND	ND	ND	3	ND	ND	14	6	1000
10...	ND	ND	ND	1	ND	ND	8	8	600
17...	--	ND	5	--	--	ND	83	11	76
24...	--	ND	8	--	--	ND	35	11	4700

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JAN									
07...	--	ND	--	ND	--	ND	--	--	--
15...	--	ND	--	ND	--	ND	--	ND	--
22...	--	ND	--	ND	--	ND	--	ND	--
27...	--	ND	--	ND	--	ND	--	ND	--
FEB									
03...	--	ND	--	ND	--	ND	--	6	--
07...	--	ND	--	ND	--	ND	--	ND	--
14...	--	ND	--	ND	--	ND	--	ND	--
19...	--	ND	--	ND	--	ND	--	--	--
26...	90	ND	ND	ND	ND	ND	ND	--	--
MAR									
05...	110	282	ND	1760	ND	ND	ND	20	--
19...	30	ND	ND	ND	ND	ND	ND	6	--
28...	90	ND	ND	ND	ND	6	ND	ND	--
APR									
03...	70	246	ND	510	ND	ND	ND	900	--
08...	50	ND	ND	ND	ND	ND	ND	ND	--
17...	70	ND	ND	ND	ND	ND	ND	ND	--
24...	60	4	ND	80	ND	13	ND	30	--
MAY									
01...	40	2	ND	100	ND	5	ND	20	<1
13...	40	ND	ND	60	ND	19	ND	20	--
22...	30	40	ND	110	ND	9	ND	50	--
29...	30	21	ND	180	ND	--	3	120	--
JUN									
07...	50	8	3	240	ND	12	ND	30	--
16...	50	ND	ND	90	ND	14	ND	10	--
25...	1400	5	--	160	ND	--	--	40	--
JUL									
02...	20	--	--	130	ND	15	ND	10	--
09...	50	--	--	100	ND	25	ND	20	--
16...	40	--	--	70	ND	ND	ND	12	--
26...	80	--	--	80	ND	16	ND	17	--
31...	50	--	--	50	ND	ND	ND	8	--
AUG									
10...	200	--	--	180	ND	50	5	40	--
13...	60	--	--	80	ND	5	ND	ND	--
20...	100	--	--	80	ND	10	ND	10	--
28...	50	--	--	90	ND	ND	ND	9	--
SEP									
05...	100	--	--	160	ND	--	--	10	--
10...	100	--	--	110	ND	--	--	ND	--
17...	70	--	--	410	20	--	--	70	--
24...	200	--	--	50	20	--	--	20	--

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
10...	--	.71	6.7	23.9	16.0	0	40	25	2.9	10
15...	--	.46	7.0	25.6	17.4	12	50	33	6.4	7.5
24...	--	.94	7.2	24.3	13.5	1	--	--	2.5	7.5
29...	1400	1.0	7.3	20.6	14.9	130	67	43	6.4	7.5
NOV										
06...	1300	.28	7.0	19.1	14.2	0	42	22	3.3	5.0
13...	1300	6.7	6.2	1.5	7.5	195	29	17	5.0	5.0
20...	1215	2.7	6.5	15.3	11.4	1	49	33	5.4	6.0
DEC										
04...	1445	1.2	6.5	10.2	7.1	9	34	18	3.6	5.0
10...	1330	1.1	6.2	1.1	4.6	6	40	24	8.6	5.0
15...	1300	.70	6.9	12.8	11.0	1	38	20	9.9	6.0
JAN										
09...	1230	1.6	7.1	-8.5	.0	23	35	22	4.5	6.2
14...	1200	1.4	6.7	2.1	3.0	125	23	14	4.1	3.0
FEB										
04...	1215	1.1	6.8	9.5	4.8	28	42	28	3.6	7.3
13...	1245	.88	7.0	17.2	9.1	5	36	23	3.5	6.7
25...	1145	1.4	6.8	15.0	7.5	3	33	19	2.9	6.3
MAR										
03...	1200	.58	7.1	21.8	12.8	8	--	--	2.0	7.0
12...	1230	2.4	6.6	10.8	9.4	27	39	23	2.0	6.8
17...	1230	.94	7.0	3.2	5.8	5	35	24	2.0	6.8
31...	1230	7.4	6.7	9.6	10.3	170	36	26	2.0	7.0
APR										
07...	1215	8.2	7.0	20.5	12.1	12	37	21	4.9	7.0
14...	1215	.44	7.0	24.0	14.0	5	39	25	4.1	7.5
23...	1400	.29	7.0	26.0	17.8	4	45	29	.9	8.5
30...	1130	.20	7.3	19.9	11.8	3	45	25	2.4	8.6
MAY										
07...	1330	.39	6.8	18.0	14.2	8	52	32	3.2	10
21...	1115	1.1	7.3	20.2	12.5	15	33	17	2.4	6.0
JUN										
04...	1115	1.3	7.2	22.0	15.4	1	37	21	1.8	6.8
10...	1100	.29	7.0	23.2	15.5	2	40	10	--	8.1
26...	1100	.66	6.8	23.4	18.5	15	48	28	--	8.9
JUL										
07...	1115	4.5	6.8	21.0	16.0	19	33	0	--	5.0
14...	1130	.91	6.9	23.1	17.2	29	44	28	--	6.7
21...	1100	.84	7.3	26.3	18.9	8	52	27	--	10
29...	1200	.12	7.4	26.6	21.4	2	57	32	--	11
AUG										
07...	1315	.18	7.1	23.6	20.0	17	77	52	--	15
12...	1245	.12	7.3	29.0	21.4	8	58	49	--	10
19...	1315	.06	7.4	26.8	21.1	8	64	32	--	13
30...	1115	.07	6.8	20.1	18.0	8	67	42	--	12
SEP										
09...	1345	.04	6.9	26.1	20.5	5	63	36	--	12
16...	1230	.04	7.0	21.2	17.3	4	68	41	--	14
22...	1300	.04	6.9	16.8	14.4	3	70	43	--	14
29...	1245	.08	6.9	19.0	17.0	3	67	42	--	11

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
10...	6.0	6.5	6.0	18	15	5.1	24	3.8	86	<1
15...	7.5	7.5	7.5	21	17	3.3	35	3.0	46	ND
24...	7.5	--	--	25	21	2.3	26	4.2	234	ND
29...	12	9.5	9.0	29	24	2.3	28	2.9	358	ND
NOV										
06...	6.0	6.5	6.5	24	20	3.1	5.0	--	82	ND
13...	5.0	4.0	4.0	15	12	15	14	.1	352	--
20...	7.5	7.5	7.3	20	16	9.4	32	--	96	--
DEC										
04...	5.0	5.5	5.3	19	16	9.4	32	--	92	--
10...	6.0	6.0	6.0	20	16	18	33	--	114	--
15...	6.0	5.7	5.7	22	18	4.4	33	--	76	--
JAN										
09...	6.8	4.5	4.3	16	13	2.0	32	1.0	144	ND
14...	4.7	3.1	2.8	11	9	3.5	14	1.3	310	ND
FEB										
04...	8.5	5.0	5.0	17	14	4.3	33	1.5	130	ND
13...	7.3	4.4	4.3	16	13	2.6	33	3.8	80	ND
25...	6.6	4.0	4.0	17	14	4.3	29	3.7	96	ND
MAR										
03...	7.1	4.5	--	19	16	2.4	35	2.1	48	ND
12...	8.0	4.7	4.7	19	16	7.6	35	1.8	84	ND
17...	7.0	4.3	4.3	13	11	2.1	34	2.8	66	ND
31...	7.1	4.3	4.4	12	10	3.8	35	1.8	540	ND
APR										
07...	7.3	4.8	4.5	19	16	3.0	37	2.4	152	ND
14...	7.6	4.8	4.8	17	14	2.7	44	2.2	80	ND
23...	8.8	5.5	5.5	20	16	3.2	49	1.5	98	ND
30...	8.9	5.5	5.4	24	20	1.9	41	1.4	148	ND
MAY										
07...	10	6.4	6.3	24	20	6.1	48	.9	156	ND
21...	6.5	4.0	4.0	19	16	1.5	29	1.4	144	ND
JUN										
04...	7.4	4.5	4.5	20	16	2.0	28	.5	128	ND
10...	7.1	5.3	5.3	36	30	5.8	34	.6	148	ND
26...	9.5	5.9	5.9	24	20	6.1	40	.3	152	ND
JUL										
07...	7.0	3.9	3.8	44	36	11	25	.5	176	ND
14...	10	4.5	4.4	19	16	3.8	32	.1	176	ND
21...	11	5.8	5.7	30	25	2.4	36	.2	164	ND
29...	12	6.3	6.3	30	25	1.9	43	.5	172	ND
AUG										
07...	16	8.5	8.5	30	25	3.8	58	.3	204	ND
12...	11	7.5	7.5	11	9	.9	50	.6	164	ND
19...	14	7.2	7.0	39	32	2.5	55	.6	220	ND
30...	13	8.6	8.4	31	25	7.9	65	.7	216	ND
SEP										
09...	13	7.6	7.4	33	27	6.6	62	.6	196	ND
16...	14	8.0	7.6	33	27	5.3	60	.6	192	ND
22...	14	8.6	8.2	33	27	6.6	58	1.2	208	ND
29...	11	9.4	9.4	30	25	6.0	70	.9	176	ND

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT									
10...	<1	1	1	--	--	ND	34	9	2500
15...	ND	ND	ND	--	--	ND	6	5	300
24...	ND	ND	ND	--	--	ND	10	5	800
29...	ND	ND	ND	--	--	--	38	10	6700
NOV									
06...	--	ND	--	--	--	--	5	5	700
13...	--	ND	--	--	--	--	27	8	5400
20...	--	ND	--	--	--	--	10	4	3200
DEC									
04...	--	ND	--	--	--	--	6	6	1000
10...	--	ND	--	--	--	--	--	--	1000
15...	--	ND	--	--	--	--	--	--	900
JAN									
09...	ND	ND	ND	1	<1	ND	8	--	1800
14...	ND	ND	ND	6	ND	ND	9	--	5600
FEB									
04...	ND	ND	ND	1	ND	ND	7	--	1300
13...	ND	ND	ND	ND	ND	ND	8	--	700
25...	ND	ND	ND	ND	ND	ND	6	--	500
MAR									
03...	ND	ND	ND	ND	ND	ND	7	--	400
12...	ND	ND	ND	ND	ND	ND	--	--	1800
17...	ND	ND	ND	ND	2	ND	8	--	300
31...	ND	ND	ND	ND	ND	ND	8	--	--
APR									
07...	ND	ND	ND	ND	ND	ND	11	--	600
14...	ND	ND	ND	ND	ND	ND	8	--	300
23...	ND	ND	ND	ND	ND	ND	8	--	300
30...	ND	ND	ND	ND	ND	ND	9	--	300
MAY									
07...	--	ND	ND	--	ND	ND	9	--	500
21...	ND	ND	ND	ND	ND	ND	6	7	700
JUN									
04...	ND	ND	ND	1	ND	ND	7	9	900
10...	ND	ND	ND	ND	ND	ND	6	7	400
26...	ND	ND	ND	1	ND	ND	7	6	1100
JUL									
07...	ND	ND	ND	2	ND	ND	7	7	1610
14...	ND	ND	ND	1	ND	ND	7	7	1550
21...	ND	ND	ND	ND	ND	ND	9	7	620
29...	ND	ND	ND	ND	ND	ND	7	7	650
AUG									
07...	ND	ND	ND	1	ND	ND	9	8	930
12...	ND	ND	ND	ND	ND	ND	10	10	840
19...	ND	ND	ND	ND	ND	ND	11	8	1410
30...	ND	ND	ND	ND	ND	ND	--	--	620
SEP									
09...	ND	ND	ND	ND	ND	ND	3	--	380
16...	ND	ND	ND	--	--	ND	2	--	410
22...	ND	ND	ND	--	--	ND	1	--	320
29...	ND	ND	ND	--	--	--	1	--	570

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
10...	100	--	--	100	20	--	--	--	--
15...	100	--	--	70	50	--	--	--	--
24...	65	--	--	80	50	--	--	--	--
29...	87	--	--	200	50	--	--	--	--
NOV									
06...	89	--	--	90	50	--	--	--	--
13...	200	--	--	60	40	--	--	--	--
20...	105	--	--	130	50	--	--	--	--
DEC									
04...	100	--	--	50	30	--	--	--	--
10...	150	--	--	70	30	--	--	--	--
15...	91	--	--	70	20	--	--	--	--
JAN									
09...	600	1	--	70	30	<1	--	--	--
14...	200	5	--	140	30	<1	--	40	18
FEB									
04...	ND	<1	--	60	ND	<1	--	30	25
13...	ND	<1	--	40	ND	<1	--	35	20
25...	100	ND	--	20	ND	ND	--	30	38
MAR									
03...	ND	ND	--	30	ND	<1	--	ND	ND
12...	ND	1	--	ND	ND	<1	--	35	ND
17...	ND	1	--	ND	ND	ND	--	25	ND
31...	--	5	--	ND	ND	ND	--	ND	ND
APR									
07...	100	1	--	30	ND	<1	--	ND	ND
14...	100	1	--	20	ND	1	--	ND	ND
23...	ND	ND	--	30	ND	ND	--	ND	ND
30...	ND	1	--	30	ND	ND	--	ND	ND
MAY									
07...	100	5	--	30	ND	2	--	ND	ND
21...	ND	1	--	30	ND	3	--	ND	ND
JUN									
04...	ND	1	--	40	ND	1	--	ND	ND
10...	ND	ND	--	40	ND	ND	--	ND	ND
26...	ND	ND	--	60	20	3	--	ND	ND
JUL									
07...	ND	ND	--	60	ND	2	--	ND	ND
14...	100	ND	--	60	30	2	--	ND	ND
21...	100	ND	--	40	30	1	--	ND	ND
29...	ND	ND	--	60	40	4	--	ND	ND
AUG									
07...	ND	ND	--	60	40	2	--	ND	ND
12...	ND	ND	--	60	60	6	--	ND	ND
19...	ND	7	--	160	60	9	--	ND	ND
30...	ND	ND	--	70	70	1	--	ND	ND
SEP									
09...	ND	ND	--	70	60	ND	--	ND	ND
16...	ND	ND	--	70	60	13	--	ND	ND
22...	ND	<1	--	70	70	2	--	ND	ND
29...	ND	ND	--	160	60	2	--	ND	ND

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
13...	1300	.15	7.2	20.0	14.0	2	--	--	--	6.5
27...	1230	1.5	6.6	6.0	7.0	6	36	23	--	7.5
NOV										
03...	1230	.84	6.0	14.0	9.0	2	48	32	--	11
16...	1245	.25	7.3	--	--	0	53	32	--	9.5
23...	--	.43	6.4	--	--	0	45	24	--	8.0
DEC										
16...	1415	1.3	7.1	6.0	5.0	1	--	--	--	9.5
20...	1400	1.3	7.0	.0	5.0	19	62	46	--	12
FEB										
05...	1320	.37	7.0	-3.0	1.0	50	48	32	--	9.5
12...	1325	3.0	7.1	7.0	.0	170	--	--	--	--
24...	1520	9.1	6.9	14.0	6.0	140	29	25	--	6.2
MAR										
04...	1645	6.3	7.1	--	--	68	33	25	--	5.0
22...	1445	.79	7.3	5.0	6.0	5	33	18	--	10
30...	1230	1.6	7.1	24.0	17.0	16	51	35	--	9.5
APR										
23...	1300	1.0	7.1	20.0	16.0	72	72	56	--	13
MAY										
03...	1240	1.2	7.1	17.0	14.0	100	46	29	--	12
31...	1315	.37	6.8	26.5	19.0	3	68	47	--	13
JUN										
22...	1430	.21	6.9	29.0	21.5	10	57	46	--	11
JUL										
09...	1315	.17	7.1	30.0	25.0	3	58	42	--	11
24...	1150	.05	6.9	29.0	23.0	0	74	54	--	15
26...	1215	.26	7.3	27.0	22.0	20	79	59	--	14
AUG										
09...	1500	.02	6.6	28.0	24.0	25	87	71	--	15
25...	1355	.17	7.1	28.0	23.0	11	75	56	--	13
SEP										
23...	1400	.34	6.5	24.5	19.0	4	63	47	--	12

DATE	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
13...	--	7.4	7.4	27	22	2.7	58	.6	144	ND
27...	7.0	4.0	4.4	16	13	6.4	35	--	80	ND
NOV										
03...	11	4.4	4.6	20	16	32	36	.6	108	ND
16...	9.5	6.8	7.2	25	21	2.0	53	.7	104	ND
23...	8.0	6.0	6.0	26	21	17	48	.8	116	ND
DEC										
16...	--	4.2	3.8	16	13	2.0	37	.5	112	ND
20...	12	8.4	7.8	19	16	3.0	60	.7	160	ND
FEB										
05...	9.5	6.4	5.8	19	16	3.0	50	.1	124	--
12...	--	7.4	6.8	15	12	1.9	55	.3	636	--
24...	6.2	4.4	3.2	5	4	.9	30	1.3	472	--
MAR										
04...	5.5	5.6	4.8	10	8	1.3	36	.9	348	--
22...	5.0	5.0	5.0	18	15	1.3	45	.9	132	--
30...	10	6.2	6.2	20	16	2.5	49	1.0	144	--
APR										
23...	14	9.3	8.9	20	16	2.5	66	1.4	276	--
MAY										
03...	9.0	7.6	5.6	21	17	2.4	36	1.3	276	--
31...	13	8.7	8.7	25	21	5.7	56	1.6	128	--
JUN										
22...	11	7.3	7.2	13	11	2.6	52	.2	68	--
JUL										
09...	11	7.3	7.3	20	16	2.5	58	1.0	72	--
24...	14	9.3	9.2	24	20	4.8	--	1.3	80	--
26...	15	10	9.8	24	20	1.9	66	.6	--	--
AUG										
09...	17	10	10	20	16	8.0	63	1.7	220	--
25...	14	9.8	9.6	23	19	2.9	59	.8	172	--
SEP										
23...	12	8.1	8.1	20	16	10	45	.5	140	--

ND--Material specifically analyzed for but not detected.

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT									
13...	ND	ND	ND	--	--	--	1	--	180
27...	ND	ND	ND	--	--	ND	2	--	350
NOV									
03...	ND	ND	ND	--	--	--	1	--	150
16...	ND	ND	ND	--	--	--	2	--	130
23...	ND	ND	ND	--	--	ND	2	--	100
DEC									
16...	ND	ND	ND	--	--	--	2	--	200
20...	ND	ND	ND	--	--	ND	2	--	1000
FEB									
05...	--	ND	ND	--	--	ND	2	5	200
12...	--	ND	ND	--	--	11	10	2	8400
24...	--	ND	ND	--	--	6	7	2	5800
MAR									
04...	--	<1	ND	--	--	2	5	4	3200
22...	--	ND	ND	--	--	--	2	4	400
30...	--	ND	ND	--	--	ND	--	4	1100
APR									
23...	--	ND	ND	--	--	ND	5	1	3400
MAY									
03...	--	<1	ND	--	--	4	5	9	4200
31...	--	ND	ND	--	--	ND	<1	<1	400
JUN									
22...	--	ND	ND	--	--	ND	1	<1	700
JUL									
09...	--	ND	ND	--	--	--	<1	17	400
24...	--	ND	ND	--	--	--	<1	1	200
26...	--	<1	ND	--	--	ND	1	3	1300
AUG									
09...	--	ND	ND	--	--	ND	1	<1	1600
25...	--	ND	ND	--	--	ND	<1	<1	700
SEP									
23...	--	ND	ND	--	--	ND	<1	<1	400

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
13...	ND	ND	--	50	50	ND	--	ND	ND
27...	ND	ND	--	50	ND	1	--	ND	ND
NOV									
03...	ND	ND	--	ND	ND	ND	--	ND	ND
16...	ND	ND	--	20	ND	2	--	ND	ND
23...	ND	ND	ND	20	ND	ND	--	ND	ND
DEC									
16...	ND	ND	ND	20	ND	ND	--	ND	ND
20...	ND	2	ND	60	40	2	1	ND	ND
FEB									
05...	ND	ND	ND	ND	ND	1	1	ND	ND
12...	ND	2	ND	ND	ND	24	1	52	ND
24...	100	1	ND	ND	ND	16	8	42	ND
MAR									
04...	ND	<1	ND	40	ND	11	2	25	ND
22...	ND	ND	ND	150	ND	1	ND	ND	ND
30...	ND	3	ND	30	ND	3	ND	340	ND
APR									
23...	ND	<1	ND	90	40	9	1	20	ND
MAY									
03...	ND	ND	ND	60	ND	10	2	20	20
31...	ND	ND	ND	40	ND	1	1	10	10
JUN									
22...	ND	ND	ND	40	ND	2	ND	10	10
JUL									
09...	100	ND	ND	40	40	1	ND	--	--
24...	100	ND	ND	80	80	ND	ND	--	--
26...	100	ND	ND	70	80	3	ND	--	--
AUG									
09...	100	ND	ND	90	70	3	2	10	ND
25...	100	ND	ND	90	90	2	ND	10	ND
SEP									
23...	100	ND	ND	60	60	ND	ND	10	10

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN

LOCATION.--Lat 36°16'14", long 84°24'17", Scott County, Hydrologic Unit 05130104, 2.5 mi (4.0 km) southwest of Smoky Junction, 3.0 mi (4.8 km) northwest of Hembree, and 4.3 mi (6.9 km) southwest of Montgomery.

DRAINAGE AREA.--2.19 mi^2 (5.67 km^2).

PERIOD OF RECORD.--December 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
JAN										
27...	1540	--	6.0	12.5	6.5	0	--	--	1.9	--
FEB										
03...	--	--	6.5	9.0	7.5	0	--	--	1.6	.8
07...	--	--	6.4	-2.5	5.0	0	--	--	1.7	1.1
14...	1400	--	6.5	14.0	6.6	0	--	--	1.6	.8
19...	1400	--	6.5	3.6	7.2	0	--	--	1.4	.8
26...	--	--	6.3	10.0	6.0	0	7	3	1.7	.8
MAR										
05...	--	--	6.4	16.5	5.3	0	6	2	1.8	.7
19...	--	--	6.4	9.5	8.0	0	6	1	1.9	.7
28...	--	--	6.2	24.5	13.2	0	6	1	1.7	.7
APR										
03...	--	--	6.3	6.0	9.5	0	6	1	1.8	.7
08...	--	--	6.5	15.9	9.0	0	6	0	1.5	.9
17...	--	--	6.4	24.0	12.4	0	6	0	1.6	.7
24...	--	--	6.4	22.0	15.0	0	7	2	1.7	.8
MAY										
01...	--	--	6.4	24.1	17.0	0	7	1	1.4	.8
13...	--	.34	6.4	23.0	17.9	0	7	0	2.3	.9
22...	--	.53	6.3	30.1	19.0	0	8	2	1.8	.8
29...	--	.22	6.3	24.0	19.1	0	8	1	2.2	1.0
JUN										
07...	--	.16	6.3	27.0	23.6	0	8	1	2.4	.9
16...	--	.64	6.4	27.1	21.0	0	8	1	2.5	.9
25...	--	.32	6.4	26.8	22.1	0	10	4	1.8	1.3
JUL										
02...	--	.06	6.5	29.0	22.8	0	10	3	2.2	1.2
09...	--	.07	6.3	29.2	26.4	0	10	4	2.1	1.3
16...	--	.04	6.4	28.2	22.0	0	10	3	2.1	1.4
31...	--	--	6.3	28.3	21.3	0	11	5	1.9	1.6
SEP										
24...	--	.64	6.4	18.9	15.5	1	7	0	3.4	1.0

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN										
27...	--	--	--	5	4	8.0	5.0	3.8	25	ND
FEB										
03...	--	1.0	--	6	5	2.5	7.0	4.0	40	ND
07...	--	.5	--	5	4	3.2	6.0	3.4	30	ND
14...	--	1.0	--	5	4	2.5	7.0	3.9	25	ND
19...	--	1.0	--	6	5	3.0	5.0	4.2	10	ND
26...	.8	1.0	1.1	5	4	3.9	6.0	4.2	10	ND
MAR										
05...	.7	1.0	1.0	5	4	2.6	6.0	4.2	15	<1
19...	.7	.9	.9	6	5	3.4	7.0	4.3	20	2
28...	.7	.9	.9	6	5	5.4	7.0	4.1	40	ND
APR										
03...	.7	.9	1.0	6	5	4.3	9.0	4.2	7	ND
08...	.7	1.0	1.0	7	6	2.9	7.0	4.3	10	ND
17...	.7	1.1	1.1	7	6	3.7	5.0	4.2	20	ND
24...	.8	1.1	1.1	6	5	3.8	6.0	4.0	25	ND
MAY										
01...	.8	1.2	1.1	7	6	4.2	6.0	3.8	15	ND
13...	.8	1.1	1.3	8	7	4.5	7.0	4.6	25	<1
22...	.8	1.2	1.3	7	6	4.6	5.0	4.0	30	<1
29...	.9	1.4	1.4	9	7	6.1	6.0	4.5	20	ND
JUN										
07...	.9	1.4	1.4	9	7	6.9	10	3.9	15	ND
16...	.9	1.3	1.3	8	7	4.1	2.0	4.0	25	ND
25...	1.2	1.6	1.6	7	6	4.5	8.0	4.5	25	ND
JUL										
02...	1.2	1.6	1.6	8	7	3.4	9.0	4.2	15	ND
09...	1.3	1.6	1.6	7	6	4.7	9.0	5.2	20	ND
16...	1.4	1.7	1.7	8	7	5.0	7.0	4.8	10	ND
31...	1.6	1.8	1.8	7	6	5.5	6.0	4.6	40	--
SEP										
24...	1.0	1.1	1.1	11	9	5.7	4.0	4.3	54	--

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
JAN										
27...	--	ND	--	ND	--	ND	--	ND	--	--
FEB										
03...	--	ND	--	ND	--	ND	--	ND	--	128
07...	--	ND	--	ND	--	ND	--	ND	--	90
14...	--	ND	--	ND	--	ND	--	ND	--	77
19...	--	ND	--	ND	--	ND	--	ND	--	64
26...	ND	ND	ND	ND	ND	ND	ND	ND	ND	51
MAR										
05...	ND	1	ND	<1	ND	ND	ND	ND	ND	66
19...	ND	2	ND	2	ND	ND	ND	ND	ND	130
28...	ND	ND	ND	2	ND	ND	ND	ND	ND	142
APR										
03...	ND	ND	ND	2	ND	ND	ND	ND	ND	137
08...	ND	ND	ND	<1	ND	ND	ND	ND	ND	73
17...	ND	ND	ND	<1	ND	ND	ND	ND	ND	72
24...	ND	ND	ND	2	ND	ND	ND	ND	ND	102
MAY										
01...	ND	ND	ND	2	ND	ND	ND	ND	ND	114
13...	<1	1	1	1	ND	ND	ND	ND	ND	125
22...	ND	1	ND	--	ND	ND	ND	ND	ND	110
29...	ND	ND	ND	<1	<1	ND	ND	ND	ND	75
JUN										
07...	ND	ND	ND	4	2	ND	ND	1	ND	13
16...	ND	ND	ND	2	ND	ND	ND	ND	ND	180
25...	ND	ND	ND	2	ND	ND	ND	ND	ND	107
JUL										
02...	ND	ND	ND	<1	<1	ND	ND	ND	ND	11
09...	ND	ND	ND	<1	<1	ND	ND	ND	ND	13
16...	ND	ND	ND	<1	<1	ND	ND	ND	ND	16
31...	--	ND	ND	<1	ND	ND	ND	ND	ND	--
SEP										
24...	--	ND	--	--	--	ND	--	--	--	600

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JAN									
27...	--	ND	--	--	--	--	--	--	--
FEB									
03...	--	ND	--	10	--	ND	--	3	--
07...	--	ND	--	5	--	ND	--	<1	--
14...	--	ND	--	3	--	ND	--	3	--
19...	--	ND	--	2	--	ND	--	<1	--
26...	40	ND	ND	3	3	ND	ND	<1	<1
MAR									
05...	40	ND	ND	2	3	ND	ND	<1	<1
19...	55	ND	ND	10	3	ND	ND	<1	1
28...	26	ND	ND	13	3	ND	ND	<1	<1
APR									
03...	28	ND	ND	6	3	ND	ND	1	<1
08...	38	ND	ND	2	2	ND	ND	<1	<1
17...	48	ND	ND	4	3	ND	ND	<1	<1
24...	24	ND	ND	1	3	ND	ND	<1	<1
MAY									
01...	23	ND	ND	12	2	ND	ND	2	<1
13...	11	ND	ND	14	1	4	ND	1	<1
22...	12	57	ND	7	2	19	ND	10	<1
29...	--	<1	ND	7	4	ND	ND	<1	<1
JUN									
07...	5	2	3	9	3	19	ND	1	1
16...	47	ND	ND	11	4	ND	ND	<1	<1
25...	31	ND	ND	10	1	7	ND	<1	1
JUL									
02...	7	--	--	4	4	ND	ND	<1	<1
09...	6	--	--	8	5	4	ND	1	<1
16...	2	--	--	10	7	--	--	5	<1
31...	--	--	--	--	--	--	--	--	--
SEP									
24...	200	ND	--	ND	ND	ND	--	ND	--

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
10...	--	.30	6.4	24.1	17.8	0	10	1	3.0	1.2
15...	--	.06	6.6	26.0	16.2	1	10	3	2.4	1.2
24...	--	.19	6.6	24.2	11.8	0	8	0	3.1	1.1
29...	1530	.32	6.2	19.0	14.3	1	8	0	3.2	1.1
NOV										
06...	1400	.18	6.4	20.3	13.8	1	8	0	3.5	1.2
13...	1430	9.7	5.9	2.5	9.8	3	7	1	2.2	1.0
20...	1300	.42	5.7	15.7	10.4	1	7	0	3.5	1.1
DEC										
04...	1530	.88	5.9	8.9	6.7	130	7	0	6.0	.5
10...	1415	1.0	5.8	1.0	5.3	160	7	0	9.4	.4
15...	1345	.58	6.5	14.0	10.8	250	7	0	7.6	.5
JAN										
09...	1345	5.0	6.4	-5.7	.0	5	--	--	4.5	.4
14...	1300	11	6.7	3.3	4.5	2000	--	--	5.2	.0
FEB										
04...	1300	3.9	6.1	12.1	5.0	500	--	--	6.7	.4
13...	1330	1.6	6.0	18.0	9.0	--	--	--	6.1	.4
25...	1230	3.9	5.4	16.3	8.3	--	--	--	5.8	.5
MAR										
03...	1300	1.3	6.3	23.0	13.3	6	--	--	2.3	.8
12...	1330	5.9	6.3	13.0	9.7	4	--	--	2.2	.8
17...	1345	1.8	6.2	5.5	7.0	--	--	--	3.0	.3
31...	1345	20	5.8	9.3	11.4	45	--	--	1.6	.4
APR										
07...	1300	2.4	--	22.0	13.5	43	--	--	4.5	.6
14...	1300	.90	5.8	25.3	15.0	23	--	--	5.5	.7
23...	1445	.58	6.5	29.0	19.4	30	--	--	2.4	.7
30...	1215	.34	6.8	21.0	13.5	38	--	--	4.4	.8
MAY										
07...	1515	.73	6.2	15.0	14.2	97	--	--	2.8	.7
21...	1200	4.1	6.4	23.2	13.6	12	--	--	2.0	.8
JUN										
04...	1200	5.9	6.6	24.4	15.1	3	--	--	2.4	.8
10...	1145	.65	6.5	26.0	15.4	2	--	--	--	--
26...	1215	9.3	6.5	25.0	18.0	12	--	--	--	.8
JUL										
07...	1200	5.9	6.5	21.5	16.3	4	--	--	--	.7
14...	1215	.90	6.5	25.0	18.8	8	--	--	--	.9
21...	1245	.07	6.9	27.3	20.1	3	--	--	--	1.1
29...	1145	.14	7.0	27.0	22.1	2	--	--	--	1.1
AUG										
07...	1330	.01	7.0	23.5	22.0	88	--	--	--	1.0
12...	1330	.01	7.2	29.9	22.2	8	--	--	--	1.2
19...	1415	.01	7.3	25.2	20.1	5	11	0	--	1.6
30...	1200	.05	6.6	22.5	20.3	10	10	0	--	1.6
SEP										
09...	1415	.01	6.8	27.1	20.8	6	12	0	--	1.7
16...	1315	.05	7.0	22.8	18.5	8	11	0	--	1.5
22...	1345	.03	6.9	17.8	15.3	7	11	0	--	1.4
29...	1345	.14	7.3	20.0	17.0	25	9	0	--	1.0

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
10...	1.2	1.8	1.8	11	9	6.7	2.0	4.6	22	--
15...	1.2	1.8	1.8	9	7	2.9	3.0	4.2	14	--
24...	1.1	1.2	1.2	10	8	3.9	.0	3.9	116	--
29...	1.1	1.2	1.2	10	8	8.6	3.0	4.1	54	--
NOV										
06...	1.2	1.2	1.2	12	10	6.8	.0	--	26	--
13...	1.1	1.0	1.0	7	6	13	8.0	28	52	--
20...	1.1	1.1	1.1	8	7	24	6.0	--	10	--
DEC										
04...	1.0	1.5	1.1	8	7	14	9.0	--	162	--
10...	1.1	1.5	1.0	8	7	20	10	--	62	--
15...	1.0	2.5	1.0	8	7	3.4	10	--	298	--
JAN										
09...	--	1.0	.9	6	5	3.8	3.0	.4	36	ND
14...	--	1.1	.9	3	2	1.0	15	3.0	1580	ND
FEB										
04...	--	1.7	1.0	6	5	7.6	12	1.0	768	ND
13...	--	1.8	1.0	7	6	11	--	2.4	688	ND
25...	--	1.3	1.0	7	6	45	--	1.2	500	ND
MAR										
03...	--	1.1	1.0	7	6	5.6	5.0	1.8	50	ND
12...	--	1.0	1.0	7	6	5.6	11	1.7	102	<1
17...	--	2.4	.9	5	4	5.0	14	2.5	1966	ND
31...	--	1.0	1.0	2	2	5.1	12	2.2	118	ND
APR										
07...	--	1.0	1.0	11	9	--	22	1.2	166	ND
14...	--	1.1	1.0	5	4	13	7.0	1.3	62	ND
23...	--	1.2	1.1	7	6	3.5	8.0	1.4	62	ND
30...	--	1.2	1.2	8	7	2.0	6.0	1.1	144	ND
MAY										
07...	--	1.4	1.3	7	6	7.1	12	.8	132	ND
21...	--	1.1	1.1	4	3	2.5	13	1.1	76	ND
JUN										
04...	--	1.2	1.2	6	5	2.4	11	.3	68	ND
10...	--	1.2	1.2	7	6	3.5	11	.2	68	ND
26...	--	1.1	1.1	8	7	4.0	13	.2	96	ND
JUL										
07...	--	1.1	1.1	12	10	6.1	12	.4	76	ND
14...	--	1.3	1.2	9	7	4.6	14	.0	88	ND
21...	--	1.4	1.4	12	10	2.4	7.0	.1	48	ND
29...	--	1.5	1.4	14	11	2.2	10	.4	84	ND
AUG										
07...	--	1.4	1.4	16	13	2.6	12	.2	172	ND
12...	--	1.6	1.6	15	12	1.5	11	.3	76	ND
19...	1.6	1.7	1.7	16	13	1.3	10	.4	92	ND
30...	1.5	1.7	1.6	14	11	5.6	13	.5	124	ND
SEP										
09...	1.7	1.9	1.8	17	14	4.3	12	.3	96	ND
16...	1.6	1.7	1.6	15	12	2.4	8.0	.3	108	ND
22...	1.5	1.8	1.7	15	12	3.0	.0	.7	120	ND
29...	1.2	1.6	1.5	13	11	1.0	10	.3	76	ND

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT										
10...	--	ND	--	--	--	ND	--	--	--	150
15...	--	ND	--	--	--	ND	--	--	--	192
24...	--	ND	--	--	--	ND	--	--	--	108
29...	--	ND	--	--	--	ND	--	--	--	220
NOV										
06...	--	ND	--	--	--	ND	--	--	--	272
13...	--	ND	--	--	--	ND	--	--	--	300
20...	--	ND	--	--	--	ND	--	--	--	400
DEC										
04...	--	ND	--	--	--	ND	--	--	--	7100
10...	--	ND	--	--	--	ND	--	--	--	9100
15...	--	ND	--	--	--	ND	--	--	--	11000
JAN										
09...	--	ND	ND	--	--	ND	--	ND	ND	840
14...	--	ND	ND	--	--	ND	--	48	4	--
FEB										
04...	--	ND	ND	--	--	ND	--	28	2	--
13...	--	ND	ND	--	--	ND	--	27	4	9400
25...	--	ND	ND	--	--	ND	--	6	1	3700
MAR										
03...	--	ND	ND	--	--	ND	--	1	ND	790
12...	--	ND	ND	--	--	ND	--	ND	ND	--
17...	--	1	ND	--	--	ND	--	50	ND	--
31...	--	ND	ND	--	--	ND	--	6	2	3800
APR										
07...	--	ND	ND	--	--	ND	--	1	ND	1990
14...	--	ND	ND	--	--	ND	--	ND	ND	1000
23...	--	ND	ND	--	--	ND	--	1	1	1690
30...	--	ND	ND	--	--	ND	--	1	1	1690
MAY										
07...	--	ND	ND	--	--	ND	--	7	3	2480
21...	--	ND	ND	--	--	ND	--	1	1	740
JUN										
04...	--	ND	ND	--	--	ND	--	1	1	740
10...	--	ND	ND	--	--	ND	--	1	1	680
26...	--	ND	ND	--	--	ND	--	ND	ND	950
JUL										
07...	--	ND	ND	--	--	ND	--	ND	ND	740
14...	--	ND	ND	--	--	ND	--	ND	ND	630
21...	--	ND	ND	--	--	ND	--	1	1	370
29...	--	ND	ND	--	--	ND	--	2	5	680
AUG										
07...	--	ND	ND	--	--	ND	--	3	1	3500
12...	--	ND	ND	--	--	ND	--	3	2	840
19...	--	ND	ND	--	--	ND	--	4	1	440
30...	--	ND	ND	--	--	ND	--	ND	ND	500
SEP										
09...	--	ND	ND	--	--	ND	--	1	ND	390
16...	--	ND	ND	--	--	ND	--	ND	ND	600
22...	--	ND	ND	--	--	ND	--	ND	ND	770
29...	--	ND	ND	--	--	ND	--	1	ND	2000

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
10...	250	ND	--	ND	ND	ND	--	ND	--
15...	34	ND	--	ND	ND	ND	--	ND	--
24...	97	ND	--	--	--	ND	--	ND	--
29...	80	ND	--	--	--	ND	--	ND	--
NOV									
06...	58	ND	--	--	--	ND	--	ND	--
13...	250	ND	--	--	--	ND	--	ND	--
20...	150	ND	--	--	--	ND	--	ND	--
DEC									
04...	400	ND	--	120	10	ND	--	ND	--
10...	250	ND	--	220	30	ND	--	ND	--
15...	300	ND	--	700	30	ND	--	ND	--
JAN									
09...	230	ND	--	--	--	1	--	ND	ND
14...	740	12	--	--	--	105	--	170	55
FEB									
04...	230	4	--	--	--	39	--	80	ND
13...	370	5	--	--	132	30	--	65	ND
25...	ND	3	--	--	--	7	--	22	ND
MAR									
03...	--	<1	--	68	20	ND	--	ND	ND
12...	ND	ND	--	24	12	ND	--	ND	ND
17...	ND	ND	--	--	--	51	--	108	ND
31...	370	ND	--	77	21	6	--	15	ND
APR									
07...	370	2	--	46	15	ND	--	ND	ND
14...	230	<1	--	37	23	ND	--	ND	ND
23...	160	<1	--	40	20	ND	--	ND	ND
30...	160	<1	--	52	22	ND	--	ND	ND
MAY									
07...	440	<1	--	36	8	--	--	ND	ND
21...	230	1	--	16	7	--	--	ND	ND
JUN									
04...	160	<1	--	17	8	--	--	ND	ND
10...	230	<1	--	13	7	--	--	ND	ND
26...	300	<1	--	21	6	--	--	ND	ND
JUL									
07...	230	<1	--	19	7	--	--	ND	ND
14...	230	ND	--	20	10	--	--	ND	ND
21...	160	<1	--	18	12	--	--	ND	ND
29...	300	<1	--	21	14	--	--	ND	ND
AUG									
07...	230	<1	--	49	11	--	--	15	ND
12...	160	1	--	47	11	--	--	15	ND
19...	ND	<1	--	26	14	--	--	ND	ND
30...	ND	<1	--	24	15	--	--	ND	ND
SEP									
09...	ND	10	--	--	--	ND	--	ND	ND
16...	200	1	--	--	--	ND	--	ND	ND
22...	200	<1	--	--	--	ND	--	ND	ND
29...	260	1	--	--	--	ND	--	ND	ND

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
13...	1345	.34	6.6	22.0	14.0	4	9	0	--	1.1
27...	1315	3.4	6.8	7.0	8.0	5	--	--	--	.9
NOV										
03...	1315	1.8	6.5	14.0	9.0	2	6	0	--	.7
16...	1330	.45	6.3	--	--	2	7	0	--	.9
23...	--	.25	5.5	--	--	7	--	--	--	1.0
DEC										
16...	1130	4.1	5.9	5.0	5.0	3	6	2	--	.7
20...	1115	3.0	6.4	3.0	6.0	10	6	1	--	.7
FEB										
05...	1420	1.0	6.8	-1.0	1.0	7	6	0	--	.6
12...	1620	3.4	6.6	8.0	.0	44	8	4	--	.6
24...	1615	23	6.2	13.0	5.0	27	6	2	--	.6
MAR										
04...	1724	13	5.6	--	--	250	5	3	--	.2
22...	1535	4.8	6.8	7.0	7.0	6	6	0	--	.6
30...	1320	4.3	6.6	25.0	15.0	15	8	3	--	1.2
MAY										
03...	1435	3.4	7.0	20.0	14.0	17	10	0	--	1.6
31...	1400	.45	6.4	30.0	21.5	12	13	0	--	2.1
JUN										
22...	1510	.14	7.2	29.0	23.0	7	16	8	--	2.6
JUL										
09...	1350	.11	6.4	30.0	27.0	1	15	7	--	2.8
24...	1100	.00	6.8	30.0	24.0	1	20	0	--	3.1
26...	1300	.25	7.2	26.0	23.0	180	14	0	--	1.6
AUG										
09...	1600	.14	6.2	27.0	24.0	350	15	1	--	1.3
25...	1445	.09	6.2	28.0	23.0	120	18	2	--	1.4
SEP										
23...	1440	.11	6.2	27.0	19.0	37	15	0	--	2.2

DATE	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
13...	1.1	1.4	1.4	12	10	4.8	6.0	.3	72	ND
27...	--	1.1	--	6	5	1.5	6.0	--	48	ND
NOV										
03...	.9	1.1	1.0	8	7	4.0	7.0	.5	32	ND
16...	.9	1.2	1.1	8	7	6.4	6.0	.4	32	ND
23...	--	1.2	--	9	7	46	8.0	1.3	44	ND
DEC										
16...	.7	1.0	1.0	5	4	10	9.0	.6	76	ND
20...	.7	1.0	1.0	6	5	3.8	10	.5	84	ND
FEB										
05...	.6	1.0	1.0	7	6	1.8	5.0	.0	56	--
12...	1.0	1.3	1.2	5	4	2.0	8.0	.2	120	--
24...	.6	1.2	1.0	5	4	4.5	11	.7	92	--
MAR										
04...	.4	1.8	.8	2	2	8.0	10	.7	612	--
22...	.6	1.0	1.0	7	6	1.8	6.0	.6	60	--
30...	1.3	1.1	1.0	6	5	2.1	13	.9	100	--
MAY										
03...	1.8	1.4	1.3	12	10	1.9	5.0	2.0	76	--
31...	2.1	1.8	1.7	16	13	10	6.0	.7	36	--
JUN										
22...	2.7	2.1	2.1	10	8	.9	23	.9	24	--
JUL										
09...	2.8	2.1	2.0	10	8	6.4	19	.8	20	--
24...	3.0	3.0	2.9	30	25	7.6	20	1.1	4	--
26...	2.0	2.2	2.1	18	15	1.8	22	.6	--	--
AUG										
09...	2.2	2.5	2.2	17	14	17	15	1.4	444	--
25...	2.8	2.8	2.7	20	16	18	34	.9	220	--
SEP										
23...	2.3	2.5	2.3	18	15	18	24	.5	128	--

ND--Material specifically analyzed for but not detected.

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT										
13...	--	ND	ND	--	--	<1	--	20	1	460
27...	--	ND	ND	--	--	ND	ND	1	1	500
NOV										
03...	--	ND	ND	--	--	ND	ND	2	1	390
16...	--	ND	ND	--	--	<1	ND	ND	ND	200
23...	--	ND	ND	--	--	ND	--	2	--	200
DEC										
16...	--	ND	ND	--	--	<1	ND	ND	ND	600
20...	--	ND	ND	--	--	ND	ND	2	2	900
FEB										
05...	--	<1	--	--	--	<1	ND	1	ND	500
12...	--	--	--	--	--	2	ND	2	2	2500
24...	--	--	--	--	--	1	ND	2	2	1200
MAR										
04...	--	1	--	--	--	19	1	15	2	12100
22...	--	--	--	--	--	<1	ND	1	1	500
30...	--	--	--	--	--	1	ND	1	2	1000
MAY										
03...	--	<1	--	--	--	ND	ND	2	5	1000
31...	--	--	--	--	--	1	ND	<1	2	600
JUN										
22...	--	<1	--	--	--	ND	ND	<1	<1	500
JUL										
09...	--	ND	ND	--	--	ND	ND	3	ND	500
24...	--	<1	ND	--	--	1	ND	2	3	600
26...	--	ND	ND	--	--	5	ND	6	6	5400
AUG										
09...	--	ND	ND	--	--	12	<1	7	3	10100
25...	--	ND	ND	--	--	3	ND	14	15	4500
SEP										
23...	--	ND	ND	--	--	1	ND	2	<1	1600

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
13...	ND	<1	--	<1	--	ND	--	ND	ND
27...	ND	ND	--	--	--	ND	--	ND	ND
NOV									
03...	ND	ND	--	--	--	ND	--	ND	ND
16...	ND	ND	--	--	--	ND	--	ND	ND
23...	ND	ND	--	--	--	ND	--	ND	ND
DEC									
16...	200	ND	--	10	ND	ND	--	ND	ND
20...	ND	ND	--	10	ND	2	--	ND	ND
FEB									
05...	ND	ND	--	ND	ND	ND	--	ND	ND
12...	ND	ND	--	40	ND	3	--	10	ND
24...	ND	ND	--	40	ND	ND	--	ND	ND
MAR									
04...	ND	30	--	110	ND	46	--	80	ND
22...	ND	ND	--	ND	ND	ND	--	ND	ND
30...	ND	ND	--	ND	ND	1	--	ND	ND
MAY									
03...	ND	ND	--	ND	ND	ND	--	10	ND
31...	ND	3	ND	40	ND	1	--	10	ND
JUN									
22...	200	ND	--	40	40	4	--	ND	ND
JUL									
09...	100	ND	--	40	40	ND	--	ND	ND
24...	200	ND	--	130	130	ND	--	ND	ND
26...	100	2	--	70	30	4	--	30	ND
AUG									
09...	100	ND	--	120	40	20	ND	60	10
25...	100	ND	--	70	50	5	--	30	20
SEP									
23...	100	ND	--	50	50	1	--	ND	ND

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN

LOCATION.--Lat 36°18'34", long 84°23'14", Scott County, Hydrologic Unit 05130104, 1.3 mi (2.1 km) southwest of Montgomery, 1.9 mi (3.1 km) south of Norma, and 2.0 (3.2 km) northwest of Smoky Junction.

DRAINAGE AREA.--0.69 mi^2 (1.79 km^2).

PERIOD OF RECORD.--December 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
JAN										
22...	--	--	6.0	8.5	6.0	0	--	--	1.8	.8
27...	1655	--	5.9	10.5	7.2	0	--	--	1.8	.9
FEB										
03...	--	--	6.5	10.0	8.0	0	--	--	1.9	.9
07...	--	--	6.3	4.2	5.1	0	--	--	2.0	.9
14...	--	--	6.2	13.5	7.0	0	--	--	1.9	.9
19...	1230	--	6.5	4.0	7.4	0	--	--	1.7	1.0
26...	--	--	6.2	11.8	6.0	0	6	1	1.8	1.0
MAR										
05...	--	.39	6.2	16.0	5.4	0	6	2	1.8	1.0
19...	--	2.4	6.2	9.0	8.0	0	6	1	1.7	.4
28...	--	.98	6.3	18.8	11.8	0	7	2	1.9	.9
APR										
03...	--	.98	6.3	5.4	7.8	0	6	1	1.7	.9
08...	--	.39	6.3	16.0	8.7	0	6	0	1.8	.9
17...	--	.48	6.3	24.5	12.1	0	6	0	1.8	.8
24...	--	.46	6.3	24.1	15.2	0	9	3	2.0	1.2
MAY										
01...	--	.42	6.3	23.6	16.0	0	7	1	1.9	1.0
13...	--	.13	6.2	19.0	15.2	0	8	1	4.0	1.2
22...	--	.39	6.3	25.4	17.8	0	8	1	3.6	1.2
29...	--	.16	6.3	27.0	18.2	0	8	1	3.9	1.2
JUN										
07...	--	.05	6.2	26.4	18.5	1	8	1	2.4	1.2
16...	--	.53	6.3	26.8	20.1	0	7	1	2.0	1.0
25...	--	.02	6.3	27.9	21.0	0	9	2	3.2	1.2
SEP										
24...	--	.95	6.3	18.0	15.6	20	8	1	3.4	1.0

DATE	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
JAN										
22...	--	.8	--	6	5	9.6	5.0	4.3	25	ND
27...	--	.8	--	6	5	12	8.0	4.3	30	ND
FEB										
03...	--	.8	--	6	5	2.8	7.0	4.5	15	ND
07...	--	.8	--	6	5	4.8	5.0	3.7	20	ND
14...	--	.8	--	6	5	6.1	6.0	4.0	30	ND
19...	--	.8	--	6	5	3.0	5.0	4.1	25	ND
26...	1.0	.8	.8	6	5	5.3	7.0	4.6	10	ND
MAR										
05...	1.0	.8	.8	5	4	4.5	7.0	4.2	15	ND
19...	.4	1.1	1.1	6	5	4.9	6.0	4.1	20	--
28...	1.0	.9	1.0	6	5	4.7	7.0	4.3	45	ND
APR										
03...	1.0	.9	.9	6	5	4.1	5.0	4.5	20	ND
08...	.9	1.0	.9	7	6	5.0	7.0	4.3	15	ND
17...	.9	.9	.9	9	7	7.1	6.0	4.1	15	<1
24...	1.3	1.3	1.3	7	6	5.2	6.0	4.3	20	ND
MAY										
01...	1.1	1.1	1.0	7	6	5.6	7.0	4.3	15	ND
13...	1.2	1.1	1.1	8	7	6.6	5.0	5.0	25	ND
22...	1.2	1.1	1.1	8	7	6.3	7.0	4.4	20	ND
29...	1.2	1.2	1.2	8	7	6.4	6.0	4.3	30	ND
JUN										
07...	1.3	1.2	1.2	9	7	7.6	6.0	5.2	10	ND
16...	1.1	1.0	1.0	7	6	5.5	7.0	4.3	35	ND
25...	1.4	1.5	1.3	8	7	6.4	5.0	4.4	15	ND
SEP										
24...	1.1	1.3	1.3	9	7	6.4	8.0	4.1	208	ND

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
JAN									
22...	--	ND	--	ND	--	ND	ND	--	160
27...	--	ND	--	ND	--	ND	ND	--	50
FEB									
03...	--	ND	--	ND	--	ND	ND	--	130
07...	--	ND	--	ND	--	ND	ND	--	180
14...	--	ND	--	ND	--	ND	ND	--	180
19...	--	ND	--	ND	--	ND	ND	--	160
26...	ND	ND	ND	ND	ND	--	ND	ND	130
MAR									
05...	ND	ND	ND	ND	ND	--	1	3	100
19...	--	--	--	2	ND	--	2	5	110
28...	ND	ND	ND	2	ND	--	3	3	90
APR									
03...	ND	ND	ND	6	<1	--	2	5	130
08...	ND	ND	ND	1	ND	--	1	3	60
17...	<1	<1	<1	6	<1	--	<1	2	100
24...	ND	ND	ND	1	ND	--	5	4	360
MAY									
01...	ND	ND	ND	--	--	--	4	5	160
13...	ND	ND	ND	--	--	--	5	4	160
22...	ND	ND	ND	--	--	--	5	5	160
29...	ND	ND	ND	--	--	--	4	4	240
JUN									
07...	ND	ND	ND	--	--	--	7	7	220
16...	<1	ND	1	--	--	--	2	4	70
25...	ND	ND	ND	--	--	--	15	4	160
SEP									
24...	ND	ND	ND	--	--	--	14	7	2700

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JAN									
22...	--	ND	--	ND	--	ND	--	3	--
27...	--	ND	--	ND	--	ND	--	1	--
FEB									
03...	--	ND	--	ND	--	3	--	8	--
07...	--	ND	--	ND	--	4	--	6	--
14...	--	ND	--	ND	--	ND	--	8	--
19...	--	ND	--	ND	--	ND	--	11	--
26...	130	ND	ND	ND	ND	ND	ND	7	12
MAR									
05...	120	ND	ND	ND	ND	ND	ND	3	5
19...	70	ND	ND	ND	ND	ND	ND	4	4
28...	50	ND	ND	ND	ND	3	ND	7	3
APR									
03...	60	5	ND	ND	ND	ND	ND	32	25
08...	120	ND	ND	ND	ND	ND	ND	3	4
17...	90	ND	ND	ND	ND	ND	ND	5	2
24...	90	1	ND	ND	ND	8	ND	2	6
MAY									
01...	130	ND	ND	ND	ND	ND	ND	6	3
13...	80	ND	ND	ND	ND	11	ND	5	5
22...	110	32	ND	ND	ND	ND	ND	22	10
29...	60	ND	ND	ND	ND	9	ND	9	9
JUN									
07...	60	2	2	ND	ND	ND	ND	14	7
16...	30	2	ND	ND	ND	--	--	3	6
25...	80	--	--	90	ND	--	--	36	6
SEP									
24...	250	--	--	ND	ND	--	--	--	--

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
10...	--	.14	5.4	24.0	16.0	18	8	1	4.1	1.2
24...	--	.05	6.5	23.9	13.8	9	8	0	3.5	1.1
29...	1615	.15	6.4	18.0	15.0	18	9	0	5.3	1.1
NOV										
06...	1430	.05	6.2	21.1	14.8	6	8	0	5.1	1.2
13...	1630	3.3	5.2	1.5	9.4	13	8	1	3.4	1.0
20...	1400	.32	5.9	14.8	11.4	7	8	0	4.3	1.2
DEC										
04...	1630	.66	5.5	7.5	7.5	8	7	0	3.6	1.0
10...	1500	.72	5.8	5.8	2.2	13	7	0	9.4	1.0
15...	1500	.39	6.2	16.5	11.2	5	7	0	5.3	1.1
JAN										
09...	1530	1.1	--	-5.5	.4	4	4	0	4.8	.0
14...	1430	2.4	6.7	4.0	4.8	3	6	2	3.5	1.0
FEB										
04...	1430	.93	5.8	15.8	6.1	3	6	2	3.6	1.0
13...	1430	.47	6.3	16.4	9.2	4	7	2	3.6	.9
25...	1330	1.2	5.8	19.6	8.7	3	7	2	2.7	.9
MAR										
03...	1345	.41	6.3	23.2	13.3	5	7	1	2.7	.9
12...	1515	1.7	5.9	12.7	10.0	4	7	0	2.1	.9
17...	1415	.60	5.8	6.0	7.4	4	7	4	2.2	.9
31...	1500	6.9	5.8	9.3	11.0	340	6	5	1.8	.5
APR										
07...	1400	.67	--	22.5	14.0	8	7	2	3.4	.9
14...	1400	.30	6.5	26.6	16.5	12	7	5	5.9	.9
23...	1530	.22	5.5	26.1	18.0	13	8	1	2.4	1.0
30...	1300	.15	6.6	22.0	13.0	7	8	1	3.2	1.2
MAY										
07...	1700	.30	6.2	12.0	13.8	12	8	1	2.8	1.2
21...	1300	.84	6.6	24.0	14.8	8	8	3	2.4	1.0
JUN										
04...	1245	.84	6.6	23.2	17.0	3	8	2	2.4	1.0
10...	1215	.22	6.4	26.4	17.0	2	8	--	--	1.2
26...	1300	1.4	6.3	24.0	19.0	82	7	0	--	.8
JUL										
07...	1300	3.8	6.5	22.0	17.8	14	7	0	--	.9
14...	1300	.30	6.6	25.8	19.0	22	8	0	--	.8
21...	1230	.11	6.7	27.0	20.2	14	9	0	--	1.0
29...	1345	.11	7.2	26.1	22.0	23	10	0	--	1.0
AUG										
07...	1500	.09	7.2	23.3	21.0	180	7	0	--	.7
12...	1400	.03	6.9	28.0	20.5	38	11	0	--	1.3
19...	1500	.02	7.4	25.1	19.0	27	12	0	--	1.4
30...	1245	.02	6.9	21.4	18.4	34	12	0	--	1.5
SEP										
09...	1500	.01	6.8	25.3	20.0	24	13	0	--	1.7
16...	1400	.02	7.2	22.1	17.0	22	13	0	--	1.6
22...	1430	.02	6.2	19.2	15.8	600	13	11	--	1.9
29...	1430	.07	6.7	20.0	18.0	900	10	0	--	2.4

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
10...	1.2	1.5	1.3	8	7	45	5.0	4.3	296	--
24...	1.2	1.3	1.3	10	8	4.4	7.0	3.8	152	ND
29...	1.2	1.4	1.4	11	9	6.5	4.0	2.8	40	ND
NOV										
06...	1.2	1.3	1.3	13	11	13	5.0	--	34	--
13...	1.1	1.1	1.2	8	7	81	--	4.0	66	--
20...	1.3	1.3	1.2	10	8	19	6.0	--	32	--
DEC										
04...	1.2	1.3	1.0	8	7	33	8.0	--	44	--
10...	1.2	1.3	1.0	8	7	19	12	--	62	--
15...	1.1	1.2	1.0	10	8	10	7.0	--	32	--
JAN										
09...	.0	1.0	1.0	7	6	--	11	.7	46	ND
14...	.9	1.0	1.0	5	4	1.6	12	1.1	30	<1
FEB										
04...	.9	1.0	1.0	5	4	13	8.0	1.3	62	ND
13...	.9	1.0	1.0	6	5	4.8	8.0	3.4	20	ND
25...	.9	1.0	1.0	6	5	15	2.0	2.0	12	ND
MAR										
03...	.9	1.0	1.0	7	6	5.6	11	1.8	--	ND
12...	.9	1.0	1.0	8	7	16	13	2.2	--	ND
17...	.9	1.0	1.0	4	3	10	11	2.1	12	ND
31...	.9	1.1	1.0	1	1	2.5	10	2.3	340	ND
APR										
07...	.9	1.0	1.0	6	5	--	10	1.4	108	ND
14...	1.0	1.1	1.0	2	2	1.0	7.0	1.6	56	ND
23...	1.2	1.2	1.2	9	7	46	9.0	.9	58	ND
30...	1.2	1.1	1.2	8	7	3.2	11	1.7	52	ND
MAY										
07...	1.2	1.3	1.2	8	7	8.1	6.0	1.0	88	ND
21...	1.2	1.2	1.1	6	5	2.4	12	1.2	104	ND
JUN										
04...	1.2	1.2	1.2	7	6	2.8	12	.4	104	<1
10...	1.0	1.3	1.3	--	--	--	14	--	92	ND
26...	1.0	1.2	1.1	8	7	6.4	13	.4	140	ND
JUL										
07...	1.0	1.2	1.2	9	7	4.6	16	.4	136	ND
14...	1.0	1.4	1.3	13	11	5.2	14	.2	156	ND
21...	1.1	1.6	1.5	14	11	4.5	12	.4	100	ND
29...	1.1	1.7	1.6	15	12	1.5	13	.9	148	ND
AUG										
07...	.8	1.6	1.2	14	11	1.4	13	.6	300	ND
12...	1.3	1.7	1.7	47	39	9.5	8.0	1.2	160	ND
19...	1.6	2.0	1.8	17	14	1.1	10	1.7	160	ND
30...	1.6	2.0	1.8	19	16	3.8	14	1.6	152	ND
SEP										
09...	1.9	2.3	2.1	22	18	5.6	10	1.6	152	ND
16...	1.8	2.2	2.0	19	16	1.9	5.0	1.1	120	ND
22...	.2	6.2	3.0	2	2	2.0	15	1.1	2092	2
29...	1.0	3.5	1.9	20	16	6.4	8.0	1.0	912	ND

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT									
10...	--	ND	3	--	--	--	44	18	7300
24...	--	ND	--	--	--	--	8	--	600
29...	ND	ND	ND	--	--	--	5	7	600
NOV									
06...	--	--	--	--	--	--	6	8	500
13...	--	--	--	--	--	--	6	8	800
20...	--	--	--	--	--	--	5	8	1000
DEC									
04...	--	--	--	--	--	--	--	--	1000
10...	--	--	--	--	--	--	--	--	1400
15...	--	--	--	--	--	--	--	--	800
JAN									
09...	--	--	--	--	--	--	--	--	--
14...	--	ND	--	--	--	ND	1	2	740
FEB									
04...	--	ND	--	--	--	ND	1	1	230
13...	--	ND	ND	--	--	ND	4	1	440
25...	--	ND	--	--	--	ND	1	1	440
MAR									
03...	--	ND	--	--	--	ND	1	1	160
12...	--	ND	--	--	--	ND	1	4	500
17...	--	ND	--	--	--	ND	5	1	440
31...	--	ND	--	--	--	3	1	1	4600
APR									
07...	--	ND	--	--	--	ND	1	1	680
14...	--	ND	--	--	--	ND	1	1	680
23...	--	ND	--	--	--	ND	2	1	740
30...	--	ND	--	--	--	ND	1	1	600
MAY									
07...	--	ND	--	--	--	ND	1	1	900
21...	--	ND	--	--	--	ND	1	1	740
JUN									
04...	--	ND	--	--	--	35	1	1	840
10...	--	ND	--	--	--	ND	1	1	680
26...	--	ND	--	--	--	ND	1	3	1760
JUL									
07...	--	ND	--	--	--	ND	1	1	1310
14...	--	ND	--	--	--	ND	1	1	1520
21...	--	ND	--	--	--	ND	1	1	1270
29...	--	ND	--	--	--	2	3	1	1920
AUG									
07...	--	ND	--	--	--	2	2	1	4200
12...	--	ND	--	--	--	ND	2	1	1420
19...	--	ND	--	--	--	ND	10	1	1130
30...	--	ND	--	--	--	ND	3	1	1670
SEP									
09...	--	ND	--	--	--	ND	1	3	1270
16...	--	ND	--	--	--	ND	5	1	1300
22...	--	2	--	--	--	20	20	--	16500
29...	--	ND	--	--	--	10	1	1	41000

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
10...	500	--	--	50	ND	--	--	--	--
24...	100	--	--	ND	ND	--	--	--	--
29...	100	--	--	ND	ND	--	--	--	--
NOV									
06...	200	--	--	ND	ND	--	--	--	--
13...	250	--	--	ND	ND	--	--	--	--
20...	200	--	--	ND	ND	--	--	--	--
DEC									
04...	250	--	--	ND	ND	--	--	--	--
10...	200	--	--	ND	ND	--	--	--	--
15...	200	--	--	ND	ND	--	--	--	--
JAN									
09...	160	--	--	ND	ND	ND	--	ND	--
14...	230	ND	--	10	4	ND	--	ND	--
FEB									
04...	ND	ND	--	8	3	ND	--	ND	--
13...	160	ND	--	19	4	ND	--	ND	--
25...	160	ND	--	11	5	ND	--	ND	--
MAR									
03...	--	ND	--	15	4	ND	--	ND	--
12...	ND	ND	--	--	--	ND	--	ND	--
17...	ND	ND	--	13	4	ND	--	100	--
31...	ND	ND	--	11	12	ND	--	30	--
APR									
07...	ND	ND	--	--	8	ND	--	ND	--
14...	160	ND	--	12	4	ND	--	ND	--
23...	ND	ND	--	11	--	ND	--	ND	--
30...	ND	ND	--	9	4	ND	--	ND	--
MAY									
07...	160	ND	--	23	6	ND	--	ND	--
21...	230	ND	--	14	6	ND	--	ND	--
JUN									
04...	230	ND	--	11	5	ND	--	ND	--
10...	160	ND	--	12	4	ND	--	ND	--
26...	160	ND	--	6	5	ND	--	ND	--
JUL									
07...	ND	ND	--	13	5	ND	--	ND	--
14...	160	ND	--	--	10	ND	--	ND	--
21...	160	ND	--	--	10	ND	--	ND	--
29...	160	ND	--	15	--	ND	--	ND	--
AUG									
07...	160	ND	--	14	10	ND	--	30	--
12...	160	ND	--	30	13	ND	--	ND	--
19...	230	ND	--	60	17	ND	--	ND	--
30...	230	--	--	50	15	ND	--	ND	--
SEP									
09...	ND	ND	--	60	20	ND	ND	ND	--
16...	ND	ND	ND	30	13	ND	ND	ND	--
22...	200	ND	--	580	160	ND	--	190	--
29...	ND	ND	--	260	50	ND	--	75	--

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)
OCT										
13...	1500	.09	6.8	24.0	14.0	51	16	0	--	2.4
27...	1415	.67	6.6	8.0	9.0	28	--	--	--	1.8
NOV										
03...	1415	.35	6.3	15.0	10.0	22	11	0	--	1.8
16...	1415	.12	6.4	15.0	10.0	7	11	0	--	2.1
23...	--	--	6.9	--	--	2	14	0	--	2.5
DEC										
16...	1015	1.0	4.7	4.0	5.0	--	8	3	--	1.2
20...	1030	.76	6.1	6.0	7.0	--	10	3	--	1.1
FEB										
05...	1055	--	6.7	-1.0	.0	19	10	3	--	1.2
12...	1255	--	7.2	10.0	.0	285	34	0	--	7.9
24...	1133	7.6	6.6	14.0	6.0	120	10	5	--	1.5
MAR										
04...	1235	3.0	6.8	15.0	8.0	115	19	8	--	4.3
22...	1130	1.4	6.6	2.0	6.0	12	9	1	--	1.6
30...	0820	.93	7.9	22.0	15.0	185	37	0	--	9.8
APR										
23...	0920	.53	6.3	18.0	15.0	12	15	1	--	2.8
MAY										
03...	1020	1.0	7.9	17.0	14.0	97	46	0	--	17
31...	1115	.09	7.3	27.5	19.0	155	44	0	--	10
JUN										
22...	1210	.09	6.6	28.0	22.0	62	52	23	--	13
JUL										
09...	1100	.05	7.1	29.0	24.0	47	57	0	--	15
24...	1010	.01	6.8	30.0	23.0	24	76	0	--	20
26...	1020	.05	7.6	23.5	22.0	400	81	0	--	17
AUG										
09...	1145	.26	7.1	28.0	23.5	550	110	13	--	19
25...	1040	.05	5.9	25.0	22.0	190	80	0	--	19
SEP										
23...	1210	.07	7.3	24.0	18.5	42	83	3	--	23

DATE	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT										
13...	2.8	2.4	2.1	23	19	5.8	5.0	.7	204	ND
27...	--	1.8	--	13	11	5.2	8.0	--	132	ND
NOV										
03...	1.9	1.8	1.6	14	11	11	9.0	.7	88	1
16...	1.9	1.9	1.6	16	13	10	6.0	.9	52	ND
23...	2.2	2.0	2.0	20	16	4.0	12	1.9	64	ND
DEC										
16...	1.2	1.4	1.3	6	5	192	13	.5	60	<1
20...	1.5	1.4	1.4	9	7	11	9.0	.6	96	<1
FEB										
05...	1.5	1.6	1.4	9	7	2.9	6.0	.1	204	--
12...	7.9	5.3	3.4	44	36	4.4	17	.6	2372	--
24...	1.6	2.2	1.5	6	5	2.4	20	1.2	500	--
MAR										
04...	4.3	2.4	1.9	14	11	3.6	23	.6	292	--
22...	1.5	1.4	1.3	10	8	4.0	26	.6	80	--
30...	11	3.2	2.4	62	51	1.2	19	6.0	504	--
APR										
23...	3.1	1.9	1.8	17	14	12	9.0	1.5	68	--
MAY										
03...	13	4.0	2.8	65	53	1.3	10	2.5	240	--
31...	11	4.0	3.6	61	50	4.4	5.0	1.8	396	--
JUN										
22...	14	4.2	4.0	35	29	14	22	1.4	208	--
JUL										
09...	15	4.8	4.6	71	58	9.0	18	1.9	216	--
24...	20	5.9	5.8	105	86	24	20	3.9	152	--
26...	23	6.7	5.2	110	90	4.4	27	2.1	1532	--
AUG										
09...	33	8.3	6.8	118	97	15	23	4.4	1904	--
25...	23	5.6	5.1	99	81	178	22	1.8	484	--
SEP										
23...	23	5.8	5.8	98	80	7.9	14	1.5	268	--

ND--Material specifically analyzed for but not detected.

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
OCT									
13...	--	ND	--	--	--	ND	2	1	2670
27...	--	ND	--	--	--	ND	2	ND	1470
NOV									
03...	--	1	--	--	--	ND	1	2	1270
16...	--	ND	--	--	--	ND	1	2	600
23...	--	ND	--	--	--	1	2	1	300
DEC									
16...	--	<1	<1	--	--	ND	2	16	500
20...	--	<1	ND	--	--	ND	1	1	300
FEB									
05...	--	ND	ND	--	--	2	1	8	1300
12...	--	<1	ND	--	--	33	25	0	27200
24...	--	<1	ND	--	--	7	8	6	5000
MAR									
04...	--	<1	ND	--	--	6	9	4	5700
22...	--	<1	ND	--	--	1	1	1	700
30...	--	<1	ND	--	--	4	9	2	5700
APR									
23...	--	ND	ND	--	--	1	3	2	800
MAY									
03...	--	ND	ND	--	--	6	7	3	5800
31...	--	ND	ND	--	--	7	8	3	5300
JUN									
22...	--	ND	ND	--	--	3	6	1	3000
JUL									
09...	--	ND	ND	--	--	2	4	1	1700
24...	--	<1	ND	--	--	1	6	4	1600
26...	--	<1	ND	--	--	15	31	2	22000
AUG									
09...	--	ND	ND	--	--	23	44	3	--
25...	--	ND	ND	--	--	6	10	2	6000
SEP									
23...	--	ND	ND	--	--	19	2	ND	1600

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT									
13...	ND	ND	--	60	50	ND	ND	ND	--
27...	--	ND	--	50	--	ND	--	--	--
NOV									
03...	ND	ND	--	50	ND	ND	--	--	--
16...	ND	ND	--	50	30	ND	--	--	--
23...	ND	ND	--	50	30	ND	--	--	--
DEC									
16...	ND	2	--	50	ND	ND	--	--	--
20...	300	ND	--	ND	ND	ND	--	--	--
FEB									
05...	300	<1	--	60	ND	2	--	ND	ND
12...	300	6	--	440	50	46	--	130	20
24...	300	5	--	200	40	13	--	60	ND
MAR									
04...	ND	5	--	140	ND	14	--	60	ND
22...	ND	ND	--	ND	ND	ND	--	ND	ND
30...	ND	2	--	100	20	14	--	20	ND
APR									
23...	ND	ND	--	40	ND	ND	--	70	ND
MAY									
03...	ND	3	--	100	ND	11	--	30	ND
31...	ND	2	--	220	40	13	--	30	10
JUN									
22...	ND	2	--	100	40	7	--	20	10
JUL									
09...	100	1	--	100	50	5	--	10	10
24...	100	1	--	120	90	5	--	20	10
26...	ND	30	--	540	60	44	--	110	10
AUG									
09...	100	35	--	780	90	50	--	170	30
25...	100	2	--	270	120	13	--	30	20
SEP									
23...	100	<1	--	180	150	2	--	10	10

ND--Material specifically analyzed for but not detected.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN

LOCATION.--Lat 36°19'04", long 84°23'07", Scott County, Hydrologic Unit 05130104, 1.0 mi (1.6 km) southwest of Montgomery, 1.3 mi (2.1 km) south of Norma, and 2.4 mi (3.9 km) northwest of Smoky Junction.

DRAINAGE AREA.--0.92 mi^2 (2.38 km^2).

PERIOD OF RECORD.--May 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
JAN												
07...	--	--	6.0	--	--	0	--	--	2.0	1.3	--	1.1
15...	--	--	6.0	--	4.0	0	--	--	1.9	.8	--	.4
22...	--	--	6.0	8.0	6.5	0	--	--	2.0	1.2	--	1.0
27...	1630	--	6.0	9.5	7.8	0	--	--	2.2	1.2	--	1.0
FEB												
03...	--	--	6.5	10.0	8.0	0	--	--	2.0	1.0	--	.8
07...	--	--	6.3	4.5	6.0	0	--	--	1.9	1.2	--	1.0
14...	--	--	6.3	13.2	7.2	0	--	--	1.8	1.2	--	1.0
19...	1245	--	6.4	7.7	5.5	0	--	--	1.9	1.3	--	1.1
26...	--	--	6.3	9.0	6.9	0	8	3	2.0	1.3	1.2	1.1
MAR												
05...	--	1.6	6.1	14.5	6.5	0	8	2	2.4	1.3	1.3	1.1
19...	--	8.6	6.3	9.2	8.5	0	8	3	2.0	1.2	1.2	1.2
28...	--	4.6	6.3	21.2	12.5	0	8	3	2.0	1.2	1.2	1.2
APR												
03...	--	2.8	6.4	6.0	8.3	0	9	2	1.9	1.2	1.3	1.3
08...	--	1.7	6.3	16.8	9.0	0	9	3	2.0	1.2	1.3	1.3
17...	--	2.2	6.3	23.0	12.0	0	9	1	2.0	1.2	1.3	1.3
24...	--	2.1	6.3	23.3	15.6	0	9	3	2.1	1.2	1.3	1.4
MAY												
01...	--	1.7	6.3	24.0	16.4	0	9	3	2.1	1.4	1.4	1.5
13...	--	.79	6.3	21.3	15.9	0	10	3	2.0	1.5	1.5	1.6
22...	--	1.5	6.3	26.1	18.2	0	10	3	2.7	1.5	1.5	1.5
29...	--	1.0	6.3	23.0	18.8	0	11	5	4.2	1.6	1.8	1.7
JUN												
07...	--	.58	6.3	26.0	19.4	0	11	4	3.2	1.7	1.8	1.7
16...	--	1.8	6.3	27.1	21.3	0	9	2	2.8	1.0	1.3	1.4
25...	--	.33	6.3	28.6	22.4	0	12	5	2.7	1.7	1.8	1.9
JUL												
02...	--	.23	6.2	28.1	21.0	0	13	7	3.4	2.0	2.0	2.0
09...	--	.41	6.2	28.4	22.1	0	12	6	3.2	1.8	1.9	1.8
16...	--	.18	6.2	27.9	20.8	0	13	7	3.3	1.9	2.0	2.1
31...	--	.02	6.2	28.1	21.6	0	13	6	2.7	2.1	2.1	2.1
AUG												
20...	--	.04	6.2	29.4	22.4	0	13	7	3.0	1.9	2.0	2.0
SEP												
24...	--	.91	6.4	18.1	15.0	0	10	3	3.9	1.4	1.4	1.7

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL COBALT (CO) (UG/L)
JAN												
07...	--	6	5	8.6	8.0	4.2	15	ND	--	ND	--	ND
15...	--	6	5	9.6	9.0	4.3	15	ND	--	ND	--	ND
22...	--	5	4	8.0	8.0	4.1	15	ND	--	ND	--	ND
27...	--	5	4	8.0	11	4.2	10	ND	--	ND	--	ND
FEB												
03...	--	6	5	3.0	9.0	4.4	20	ND	--	ND	--	ND
07...	--	6	5	4.7	8.0	4.3	25	ND	--	ND	--	ND
14...	--	6	5	4.7	7.0	3.9	20	ND	--	ND	--	ND
19...	--	6	5	3.7	10	4.2	15	ND	--	ND	--	ND
26...	1.1	6	5	4.8	8.0	4.3	15	ND	ND	ND	ND	--
MAR												
05...	1.1	7	6	7.4	11	4.3	10	ND	ND	ND	ND	--
19...	1.2	6	5	4.6	9.0	4.4	20	ND	ND	ND	ND	--
28...	1.2	6	5	3.9	10	4.5	15	ND	ND	ND	ND	--
APR												
03...	1.3	8	7	5.1	11	3.5	15	ND	ND	ND	ND	ND
08...	1.3	7	6	4.6	9.0	4.2	25	ND	ND	ND	ND	ND
17...	1.3	10	8	7.1	8.0	4.5	20	ND	ND	ND	ND	ND
24...	1.3	7	6	4.8	10	4.5	25	ND	ND	ND	ND	ND
MAY												
01...	1.4	7	6	5.0	10	4.5	25	ND	ND	ND	ND	ND
13...	1.6	9	7	5.9	9.0	4.5	15	ND	ND	ND	ND	ND
22...	1.5	8	7	5.5	9.0	4.4	20	ND	ND	ND	ND	ND
29...	1.7	7	6	5.2	10	4.3	15	ND	2	ND	2	ND
JUN												
07...	1.7	9	7	7.2	11	4.5	10	ND	ND	ND	ND	ND
16...	1.4	9	7	6.9	10	4.5	25	ND	--	ND	4	ND
25...	1.8	8	7	6.4	7.0	3.6	20	ND	ND	ND	ND	ND
JUL												
02...	2.0	7	6	7.1	11	4.2	15	ND	ND	ND	ND	ND
09...	1.8	7	6	6.2	11	4.2	15	ND	ND	ND	ND	ND
16...	1.9	7	6	7.1	10	3.8	10	ND	ND	ND	ND	ND
31...	2.0	8	7	7.9	12	3.9	72	ND	ND	ND	ND	--
AUG												
20...	2.0	7	6	6.4	16	4.1	72	ND	ND	ND	ND	--
SEP												
24...	1.7	8	7	5.1	11	4.3	60	ND	<1	ND	1	--

ND--Material specifically analyzed for but not detected.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975

DATE	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
JAN												
07...	ND	--	60	--	ND	--	ND	--	ND	--	ND	--
15...	ND	--	30	--	ND	--	ND	--	ND	--	ND	--
22...	ND	--	80	--	ND	--	ND	--	ND	--	ND	--
27...	ND	--	50	--	ND	--	ND	--	ND	--	ND	--
FEB												
03...	ND	--	90	--	ND	--	ND	--	ND	--	ND	--
07...	ND	--	110	--	ND	--	ND	--	ND	--	ND	--
14...	ND	--	80	--	ND	--	ND	--	ND	--	ND	--
19...	ND	--	80	--	ND	--	ND	--	ND	--	ND	--
26...	ND	ND	120	110	ND	ND	ND	ND	ND	ND	ND	--
MAR												
05...	4	6	70	100	ND	ND	ND	ND	ND	ND	ND	--
19...	4	5	80	40	ND	ND	ND	ND	ND	ND	ND	--
28...	48	5	200	50	ND	ND	ND	ND	ND	ND	ND	ND
APR												
03...	--	--	350	130	ND	ND	ND	ND	ND	ND	ND	--
08...	10	7	160	130	ND	ND	ND	ND	ND	ND	ND	--
17...	4	5	80	100	ND	ND	ND	ND	ND	ND	ND	--
24...	7	5	460	40	ND	ND	ND	ND	ND	ND	ND	--
MAY												
01...	4	4	260	150	ND	ND	ND	ND	25	12	ND	--
13...	6	5	190	40	ND	ND	ND	ND	8	ND	ND	--
22...	8	5	200	40	40	ND	ND	ND	ND	ND	18	--
29...	5	19	300	70	ND	ND	ND	ND	3	7	ND	--
JUN												
07...	3	4	180	ND	ND	ND	ND	ND	6	5	ND	--
16...	2	5	380	70	ND	ND	20	ND	--	--	ND	--
25...	3	3	500	ND	ND	ND	ND	ND	--	--	ND	--
JUL												
02...	5	4	210	ND	--	--	70	ND	--	--	ND	--
09...	4	6	100	ND	--	--	ND	ND	--	--	ND	--
16...	14	7	580	30	--	--	60	ND	--	--	5	--
31...	10	5	200	ND	--	--	ND	ND	ND	--	ND	--
AUG												
20...	5	2	190	70	ND	--	ND	ND	--	--	ND	--
SEP												
24...	4	5	500	200	ND	--	7	2	ND	--	5	--

ND--Material specifically analyzed for but not detected.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT												
10...	--	.03	6.3	23.9	16.1	0	12	5	4.1	1.5	1.5	2.0
15...	--	.02	6.3	26.7	16.2	1	12	5	4.0	1.6	1.6	2.0
24...	--	.16	6.5	24.1	15.0	0	--	--	2.9	1.5	1.5	--
29...	1700	.29	6.2	18.1	14.9	1	11	0	4.4	1.5	1.5	1.7
NOV												
06...	1500	.12	6.2	21.0	14.8	1	10	0	4.5	1.4	1.4	1.7
13...	1700	4.6	5.1	1.6	9.6	3	9	2	3.0	1.1	1.3	1.3
20...	1415	.61	5.7	14.6	10.9	1	10	0	4.5	1.3	1.4	1.5
DEC												
04...	1700	1.0	5.4	6.0	7.0	2	9	2	3.8	1.2	1.3	1.4
10...	1530	1.3	5.4	3.0	5.8	2	9	2	7.7	1.3	1.4	1.4
15...	1530	.75	6.1	16.0	11.1	1	9	2	5.5	1.3	1.3	1.4
JAN												
09...	1600	2.2	--	-8.2	.7	1	7	0	5.1	.8	.8	1.2
14...	1515	3.0	6.8	4.1	4.7	1	7	2	4.1	.8	.8	1.2
FEB												
04...	1500	1.1	5.6	14.0	6.4	2	7	1	3.4	.8	.9	1.2
13...	1515	.72	6.1	17.2	9.7	2	8	2	3.1	.9	.9	1.3
25...	1400	1.4	5.7	19.0	9.6	2	7	1	3.1	.8	.9	1.2
MAR												
03...	1430	.55	6.3	22.8	14.5	1	8	2	2.8	.9	.9	1.3
12...	1445	2.0	6.3	13.2	10.4	2	8	2	2.8	.8	.9	1.2
17...	1445	.68	6.0	7.1	8.2	2	8	5	1.9	.9	.9	1.3
31...	1545	8.6	6.0	9.8	11.5	4	7	5	2.4	.8	.8	1.2
APR												
07...	1430	.83	--	23.3	15.0	2	7	3	3.7	.8	.9	1.2
14...	1430	.38	6.7	26.2	16.8	2	8	4	6.7	.9	.9	1.3
23...	1600	.19	5.5	28.0	19.1	2	8	2	2.1	1.0	1.0	1.4
30...	1330	.13	6.5	19.4	14.2	3	9	5	3.6	.9	1.0	1.4
MAY												
07...	1630	.23	6.2	13.5	13.9	2	9	2	2.6	1.0	1.0	1.5
21...	1315	.58	6.6	26.0	14.5	4	9	2	3.2	1.0	1.0	1.4
JUN												
04...	1315	.79	6.5	21.4	16.8	0	8	2	2.4	1.0	1.0	1.4
10...	1245	.09	6.3	29.1	17.1	0	9	2	--	1.0	1.0	1.5
26...	1330	1.6	6.5	25.8	17.8	8	8	0	--	.9	1.0	1.4
JUL												
07...	1330	2.2	6.2	22.0	16.6	1	8	0	--	.8	.8	1.3
14...	1330	.23	6.3	28.4	19.0	1	9	2	--	1.0	1.0	1.5
21...	1300	.02	6.8	27.9	20.2	0	9	0	--	1.0	1.0	1.6
29...	1300	.02	6.7	25.2	22.1	0	10	0	--	1.1	1.1	1.6
AUG												
07...	1545	--	7.1	22.9	21.0	6	10	0	--	1.2	1.2	1.6
SEP												
29...	1515	.01	7.0	20.0	17.0	7	10	0	--	1.3	1.3	1.8

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL RESI-DUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT												
10...	2.0	9	7	6.6	5.0	2.9	94	<1	ND	1	ND	--
15...	2.0	8	7	5.3	3.0	3.8	96	ND	<1	ND	1	--
24...	--	11	9	5.3	2.0	4.0	110	ND	ND	ND	ND	--
29...	1.7	13	11	13	6.0	3.3	44	ND	ND	ND	ND	ND
NOV												
06...	1.7	14	11	13	4.0	--	12	ND	ND	ND	ND	ND
13...	1.3	8	7	102	10	27	46	ND	ND	ND	ND	ND
20...	1.5	12	10	38	.0	--	24	--	--	ND	--	ND
DEC												
04...	1.4	8	7	51	13	--	46	--	--	ND	--	ND
10...	1.4	9	7	51	11	--	46	--	--	ND	--	ND
15...	1.4	9	7	9.3	7.0	--	48	--	--	ND	--	ND
JAN												
09...	1.2	10	8	--	10	.5	4	--	--	ND	--	ND
14...	1.2	6	5	1.5	10	1.3	8	--	--	ND	--	ND
FEB												
04...	1.2	7	6	28	12	1.4	36	--	--	ND	--	ND
13...	1.2	7	6	8.9	7.0	2.6	24	--	--	ND	--	ND
25...	1.2	7	6	22	5.0	1.5	60	--	--	ND	--	ND
MAR												
03...	1.3	7	6	5.6	13	2.2	12	--	--	ND	--	ND
12...	1.2	7	6	5.6	13	2.3	34	--	--	ND	--	ND
17...	1.3	4	3	6.4	15	2.5	24	--	--	ND	--	ND
31...	1.2	3	2	4.8	14	2.1	2	--	--	ND	--	ND
APR												
07...	1.2	5	4	--	12	1.7	80	--	--	ND	--	ND
14...	1.3	5	4	1.6	12	1.8	38	<1	ND	<1	ND	ND
23...	1.4	7	6	35	13	1.2	28	<1	ND	<1	ND	ND
30...	1.4	5	4	2.5	16	1.2	88	ND	ND	ND	ND	ND
MAY												
07...	1.5	8	7	8.1	15	.8	76	<1	ND	<1	ND	ND
21...	1.4	8	7	3.2	15	.9	64	<1	ND	<1	ND	ND
JUN												
04...	1.4	7	6	3.5	15	.4	72	ND	ND	ND	ND	ND
10...	1.5	8	7	6.4	18	.3	112	ND	<1	<1	ND	ND
26...	1.4	11	9	5.6	17	.3	76	ND	<1	ND	<1	ND
JUL												
07...	1.3	15	12	15	17	.4	104	<1	ND	<1	ND	ND
14...	1.4	9	7	7.2	16	.2	84	ND	ND	ND	ND	ND
21...	1.5	12	10	3.0	13	.1	72	ND	ND	ND	ND	ND
29...	1.6	12	10	3.8	15	.3	96	<1	<1	<1	<1	ND
AUG												
07...	1.6	24	20	3.1	15	.2	144	<1	<1	<1	<1	ND
SEP												
29...	1.7	20	16	3.2	11	3.4	120	--	--	ND	ND	<1

ND--Material specifically analyzed for but not detected.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT												
10...	2	4	--	--	--	--	4	1	ND	--	--	--
15...	3	5	--	--	--	--	1	2	ND	--	--	--
24...	2	2	--	--	--	--	1	ND	ND	--	--	--
29...	1	3	--	--	ND	--	2	1	ND	--	ND	--
NOV												
06...	2	1	--	--	ND	--	4	2	ND	--	ND	--
13...	2	6	200	200	ND	--	4	3	ND	--	ND	--
20...	3	8	400	200	ND	--	19	4	ND	--	ND	--
DEC												
04...	4	3	250	200	ND	--	4	2	ND	--	ND	--
10...	3	3	300	150	ND	--	3	1	ND	--	ND	--
15...	2	3	200	150	ND	--	3	1	ND	--	ND	--
JAN												
09...	1	ND	230	160	ND	--	2	1	ND	--	ND	--
14...	ND	1	300	160	ND	--	2	1	ND	--	ND	--
FEB												
04...	1	ND	160	ND	ND	--	5	1	ND	--	ND	--
13...	ND	1	500	ND	ND	--	--	1	ND	--	ND	--
25...	ND	ND	370	ND	ND	--	19	2	ND	--	ND	--
MAR												
03...	ND	ND	ND	ND	ND	--	3	1	ND	--	ND	--
12...	ND	ND	230	ND	ND	--	4	2	ND	--	ND	--
17...	ND	1	160	ND	ND	--	3	3	ND	--	ND	--
31...	ND	ND	440	ND	ND	--	8	1	ND	--	--	--
APR												
07...	1	ND	300	ND	ND	--	3	1	ND	--	ND	--
14...	ND	ND	160	ND	ND	--	4	2	ND	--	ND	--
23...	ND	ND	300	790	ND	--	5	8	ND	--	ND	--
30...	ND	1	230	ND	ND	--	4	2	ND	--	ND	--
MAY												
07...	ND	ND	300	ND	ND	--	7	--	ND	--	ND	--
21...	ND	ND	230	ND	ND	--	6	3	ND	--	ND	--
JUN												
04...	ND	ND	230	ND	ND	--	6	4	ND	--	ND	--
10...	2	1	160	ND	ND	--	4	2	ND	--	ND	--
26...	1	ND	370	230	ND	--	9	3	ND	--	ND	--
JUL												
07...	ND	ND	440	230	ND	--	9	3	ND	--	ND	--
14...	2	ND	230	ND	ND	--	7	5	ND	--	ND	--
21...	ND	2	440	ND	ND	--	20	2	ND	--	ND	--
29...	1	ND	230	ND	ND	--	--	4	ND	--	ND	--
AUG												
07...	1	1	230	ND	ND	--	13	5	ND	--	ND	--
SEP												
29...	ND	<1	350	ND	ND	--	ND	ND	ND	--	ND	--

ND--Material specifically analyzed for but not detected.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	PH (UNITS)	AIR TEMPERATURE (DEG C)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	TOTAL ACIDITY AS CACO3 (MG/L)	TOTAL CALCIUM (CA) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT												
13...	1545	.03	6.4	23.0	16.0	0	11	4	--	1.5	1.5	1.7
27...	1445	.55	6.2	6.0	10.0	1	--	--	--	1.1	1.1	1.6
NOV												
03...	1445	.33	6.2	14.0	10.0	0	9	4	--	1.1	1.1	1.5
16...	1415	.08	6.1	--	--	0	9	2	--	1.3	1.1	1.5
23...	--	--	6.6	--	--	0	9	2	--	1.0	1.1	1.5
DEC												
16...	0945	1.3	5.1	2.0	5.0	--	8	4	--	1.0	1.0	1.4
20...	1015	.83	6.1	8.0	7.0	--	8	3	--	1.2	1.1	1.5
FEB												
05...	1125	.33	6.5	-1.0	1.0	1	7	2	--	.8	.9	1.3
12...	1330	.58	6.6	12.0	1.0	0	9	4	--	1.1	1.1	1.5
24...	1215	7.7	6.2	14.0	6.0	8	8	2	--	1.0	.9	1.4
MAR												
04...	1325	2.4	6.2	15.0	8.0	1	8	4	--	1.0	1.0	1.3
22...	1200	1.6	6.3	3.0	6.0	7	8	3	--	.8	1.0	1.2
30...	0930	.87	6.2	22.0	15.0	1	8	2	--	1.0	1.0	1.3
APR												
23...	0955	.43	6.3	18.0	15.0	0	9	2	--	1.1	1.1	1.4
MAY												
03...	1100	1.1	6.4	18.0	14.0	1	8	0	--	1.0	1.0	1.5
31...	1030	<.01	5.9	29.0	21.0	0	11	2	--	1.7	1.7	1.7
JUN												
22...	1130	<.01	6.9	28.0	22.0	0	12	1	--	1.9	1.9	1.7
JUL												
26...	0945	<.01	6.1	25.0	22.0	5	13	3	--	1.7	1.7	2.0
AUG												
25...	1140	.03	6.5	26.0	22.0	1	11	3	--	1.5	1.5	1.6
SEP												
23...	1120	<.01	6.2	23.0	19.5	0	13	3	--	1.9	1.9	1.9

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL RESIDUE (MG/L)	TOTAL ARSENIC (AS) (UG/L)	DISSOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	DISSOLVED CADMIUM (CD) (UG/L)	TOTAL COBALT (CO) (UG/L)
OCT												
13...	1.7	8	7	5.1	13	.4	100	--	--	<1	ND	--
27...	--	7	6	7.1	11	--	48	--	--	ND	ND	ND
NOV												
03...	1.5	6	5	6.1	11	1.0	32	--	--	<1	ND	--
16...	1.5	8	7	10	10	.4	20	--	--	ND	ND	--
23...	1.5	9	7	3.6	10	1.0	36	--	--	ND	ND	ND
DEC												
16...	1.2	5	4	64	10	.4	44	--	--	<1	ND	--
20...	1.2	6	5	7.6	10	.4	48	--	--	ND	ND	ND
FEB												
05...	1.2	6	5	3.0	7.0	.1	68	--	--	<1	ND	ND
12...	1.4	6	5	2.4	12	.2	72	--	--	ND	ND	--
24...	1.3	7	6	7.1	16	1.1	72	--	--	ND	ND	--
MAR												
04...	1.3	5	4	4.5	21	.8	8	--	--	ND	ND	--
22...	1.2	6	5	4.4	20	.4	76	--	--	ND	ND	--
30...	1.3	7	6	7.1	22	.6	60	--	--	ND	ND	ND
APR												
23...	1.4	9	7	7.2	10	.8	40	--	--	ND	ND	ND
MAY												
03...	1.3	10	8	5.7	10	1.1	32	--	--	1	ND	--
31...	1.6	11	9	22	8.0	1.0	32	--	--	ND	ND	ND
JUN												
22...	1.6	6	5	1.1	18	.7	12	--	--	ND	ND	ND
JUL												
26...	2.0	12	10	15	22	.4	--	--	--	<1	ND	ND
AUG												
25...	1.6	10	8	5.1	14	.7	60	--	--	ND	ND	ND
SEP												
23...	1.9	12	10	12	13	.3	56	--	--	ND	ND	ND

ND--Material specifically analyzed for but not detected.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT												
13...	ND	ND	ND	ND	ND	--	ND	ND	ND	--	ND	--
27...	ND	ND	150	ND	ND	--	ND	ND	ND	--	ND	--
NOV												
03...	ND	1	ND	ND	ND	--	ND	ND	1	--	ND	--
16...	ND	1	ND	ND	ND	--	ND	ND	ND	--	ND	ND
23...	1	1	ND	ND	ND	--	ND	ND	ND	--	ND	--
DEC												
16...	1	ND	200	ND	ND	--	ND	ND	ND	--	ND	--
20...	ND	ND	1000	ND	ND	--	ND	ND	1	--	ND	--
FEB												
05...	2	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	--
12...	ND	ND	30	ND	ND	ND	ND	ND	ND	--	ND	--
24...	ND	ND	550	550	ND	ND	ND	ND	ND	--	ND	--
MAR												
04...	ND	ND	250	120	ND	ND	ND	ND	ND	--	ND	--
22...	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	--
30...	1	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	--
APR												
23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	ND	--
MAY												
03...	ND	1	ND	ND	ND	ND	ND	ND	ND	--	ND	--
31...	1	ND	ND	ND	ND	ND	ND	ND	1	--	ND	--
JUN												
22...	3	3	ND	ND	ND	ND	ND	ND	1	--	ND	--
JUL												
26...	1	1	200	100	ND	ND	ND	ND	ND	--	--	--
AUG												
25...	ND	ND	100	100	ND	ND	ND	ND	ND	--	ND	--
SEP												
23...	1	3	100	100	ND	ND	ND	ND	ND	--	ND	--

ND--Material specifically analyzed for but not detected.

03408500 NEW RIVER AT NEW RIVER, TN

LOCATION.--Lat 36°23'08", long 84°33'17", Scott County, Hydrologic Unit 05130104, on left bank at town of New River, 700 ft (210 m) downstream from Phillips Creek, 1,000 ft (300 m) downstream from bridge on U. S. Highway 27, 1.7 mi (2.7 km) downstream from Brimstone Creek, and at mile 8.6 (13.8 km).

DRAINAGE AREA.--382 mi^2 (989 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year. Gage-height records collected in this vicinity 1908-52 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 1436: Drainage area. WRD TN-73: 1939(M), 1951(M), 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.43 ft (332.973 m) above mean sea level.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--43 years, 738 ft^3/s (20.90 m^3/s), 26.24 in/yr (666 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,700 ft^3/s (1,810 m^3/s) May 27, 1973, gage height, 37.91 ft (11.555 m), from high water mark in gage well, from rating curve extended above 27,000 ft^3/s (765 m^3/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, no flow part of each day Aug. 12-15, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 41.2 ft (12.56 m), discharge, 74,700 ft^3/s (2,120 m^3/s), estimated, based on field survey at old U. S. Weather Bureau gage, 1,200 ft (400 m) upstream at datum 3.41 ft (1.039 m) higher.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft^3/s (340 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0730	13000	368	16.19	4.935	Apr. 5	0300	*47100	1330	32.25	9.830

Minimum discharge, 14 ft^3/s (0.40 m^3/s) July 24, 25, gage height, 1.71 ft (0.521 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	789	335	439	156	1120	1150	880	73	168	42	38
2	123	516	306	523	142	876	853	673	57	289	38	114
3	77	373	270	470	143	725	3940	571	47	219	38	113
4	55	295	237	443	161	1350	25000	581	41	137	32	76
5	43	236	214	452	204	2170	26200	475	36	105	48	95
6	36	192	219	542	175	1390	3080	403	34	87	123	68
7	36	162	3990	702	134	1030	1710	339	34	72	131	148
8	99	144	2480	672	119	790	1220	316	115	62	54	601
9	248	128	1150	664	118	642	920	251	71	55	105	271
10	372	118	773	1210	129	545	744	202	56	46	425	145
11	163	116	603	1120	139	479	617	175	47	42	652	101
12	109	115	845	874	196	591	522	155	45	62	201	77
13	81	114	1280	754	640	7440	458	137	49	51	185	62
14	63	102	992	750	661	2300	413	124	69	49	146	90
15	53	96	818	1320	592	1340	376	115	122	41	241	415
16	46	102	716	1100	479	970	334	106	91	33	250	1230
17	43	106	570	633	393	742	295	97	79	28	187	906
18	39	97	479	834	394	658	264	86	112	25	231	513
19	37	92	400	607	379	584	249	80	114	22	170	311
20	42	90	391	518	346	655	226	76	291	20	115	229
21	78	87	476	487	304	650	205	72	264	18	100	168
22	110	83	343	395	275	643	192	70	160	19	66	129
23	75	78	370	374	281	606	582	87	252	16	52	106
24	62	72	332	299	2380	541	2000	122	345	15	160	88
25	2070	69	330	290	2150	496	1170	130	894	33	380	94
26	4450	70	652	268	1300	452	776	95	2470	312	160	1320
27	925	82	712	266	1360	404	575	89	1040	162	97	1960
28	481	132	634	267	1510	372	454	83	571	82	70	1560
29	312	352	568	282	---	390	1190	78	323	54	56	700
30	277	439	434	223	---	666	1220	132	209	42	52	425
31	953	---	554	186	---	2340	---	103	---	39	41	---
TOTAL	11802	5447	22473	17964	15260	33957	76935	6903	8111	2405	4648	12153
MEAN	381	182	725	579	545	1095	2565	223	270	77.6	150	405
MAX	4450	789	3990	1320	2380	7440	26200	880	2470	312	652	1960
MIN	36	69	214	186	118	372	192	70	34	15	32	38
CFSM	1.00	.48	1.90	1.52	1.43	2.87	6.72	.58	.71	.20	.39	1.06
IN.	1.15	.53	2.19	1.75	1.49	3.31	7.49	.67	.79	.23	.45	1.18

CAL YR 1976	TOTAL	230537.4	MEAN 630	MAX 17500	MIN 9.7	CFSM 1.65	IN 22.45		
WTR YR 1977	TOTAL	218058.0	MEAN 597	MAX 26200	MIN 15	CFSM 1.56	IN 21.23		

03408500 NEW RIVER AT NEW RIVER, TN--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on U.S. Highway 27, 1,000 ft (300 m) upstream from discharge station.

PERIOD OF RECORD.--Water years 1964-67, 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1976 to September 1977.
pH: October 1976 to September 1977.
WATER TEMPERATURE: October 1976 to September 1977.
DISSOLVED OXYGEN: October I976 to September 1977.
TURBIDITY: December 1976 to September 1977.
OXIDATION-REDUCTION POTENTIAL: December I976 to September I977.
SUSPENDED SEDIMENT DISCHARGE: October I976 to September 1977.

INSTRUMENTATION.--Six parameter water quality monitor and sediment pumping sampler since Oct. 21, I976.

REMARKS.--Interruptions in the record on many days were due to malfunctions of the instruments.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 610 micromhos/cm Oct. 25; minimum daily, 44 micromhos/cm Apr. 4
WATER TEMPERATURE: Maximum daily, 31.5°C July 17; minimum daily, 0.0 Jan. I, 2, 13, 17, I9, Feb. 6.
DISSOLVED OXYGEN: Maximum daily, 14.4 mg/L Dec. 6; minimum daily, 5.6 mg/L July 26.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,720 mg/L Apr. 5; minimum daily mean, 1 mg/L on many days.
SEDIMENT LOADS: Maximum daily, 262,000 tons (238,000 tonnes) Apr. 5; minimum daily, 0.19 tons (0.17 tonnes) on many days.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	262	200	231	338	256	299	166	154	160
2	---	---	---	200	190	195	254	216	233	176	160	168
3	---	---	---	198	190	194	218	208	214	176	162	171
4	---	---	---	206	196	201	216	204	209	166	156	161
5	---	---	---	216	206	210	214	204	208	160	150	156
6	---	---	---	224	214	218	210	202	207	156	150	154
7	---	---	---	232	222	226	202	126	167	154	144	149
8	---	---	---	240	228	234	128	118	122	154	144	149
9	---	---	---	246	236	241	128	108	118	196	138	165
10	---	---	---	256	242	249	126	114	119	196	130	163
11	---	---	---	262	252	256	136	124	129	178	130	149
12	---	---	---	268	260	263	200	142	160	176	114	125
13	---	---	---	278	264	271	160	146	155	118	114	116
14	---	---	---	284	274	281	164	130	140	128	116	123
15	---	---	---	288	282	285	170	128	143	140	126	131
16	---	---	---	308	294	301	140	130	135	186	132	164
17	---	---	---	316	304	310	146	136	141	188	124	136
18	---	---	---	314	308	312	152	144	147	132	122	127
19	---	---	---	320	308	313	156	148	151	134	128	130
20	---	---	---	324	314	319	160	150	155	142	136	139
21	398	368	375	326	318	323	172	156	164	156	136	145
22	472	414	451	328	320	325	180	168	174	160	148	154
23	430	404	414	334	324	329	180	168	175	154	148	151
24	402	384	392	338	328	332	242	168	195	160	150	154
25	610	198	370	342	330	337	276	172	205	166	158	162
26	196	144	152	342	334	338	172	158	163	204	164	175
27	176	150	164	340	330	335	228	150	194	212	170	185
28	194	176	186	336	320	326	220	158	210	228	178	197
29	214	194	204	332	308	323	230	134	181	---	---	---
30	220	210	215	352	330	342	334	134	203	---	---	---
31	254	216	236	---	---	---	172	140	147	---	---	---
MONTH				352	190	281	338	108	173	228	114	152

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	146	142	144	163	157	159
2	---	---	---	---	---	---	150	130	143	183	149	162
3	---	---	---	152	144	147	154	88	110	157	149	154
4	232	226	228	156	144	150	56	44	57	175	151	162
5	232	226	228	178	136	161	96	58	70	197	177	190
6	226	218	222	178	128	147	---	---	---	219	185	197
7	---	---	---	210	130	157	---	---	---	241	203	226
8	---	---	---	166	138	142	142	138	140	236	200	211
9	252	246	249	152	142	147	152	144	148	384	212	342
10	---	---	---	158	148	154	162	152	157	356	266	253
11	---	---	---	168	158	163	170	160	164	265	235	248
12	---	---	---	168	154	165	---	---	---	237	219	229
13	---	---	---	178	112	131	---	---	---	252	220	231
14	---	---	---	132	116	123	---	---	---	261	231	251
15	---	---	---	148	132	140	---	---	---	261	233	245
16	---	---	---	164	148	153	---	---	---	266	246	256
17	---	---	---	162	152	155	---	---	---	275	257	265
18	---	---	---	164	156	161	---	---	---	279	265	271
19	---	---	---	174	162	169	224	220	223	302	266	286
20	---	---	---	174	170	173	236	228	232	339	291	304
21	---	---	---	182	174	178	238	208	217	327	291	305
22	---	---	---	206	174	185	232	222	227	340	306	228
23	---	---	---	210	202	205	235	195	219	313	305	310
24	---	---	---	210	172	190	197	169	179	327	307	317
25	---	---	---	180	174	178	179	149	164	342	308	332
26	---	---	---	182	176	179	165	147	155	398	352	385
27	---	---	---	182	178	181	199	145	178	390	338	360
28	---	---	---	220	178	186	211	163	185	384	340	350
29	---	---	---	232	186	217	203	165	179	400	344	360
30	---	---	---	198	184	188	181	157	170	418	344	360
31	---	---	---	252	144	187	---	---	---	394	372	382
MONTH				252	112	166				418	149	269
		JUNE			JULY			AUGUST			SEPTEMBER	
1	420	376	398	208	176	183	514	502	510	---	---	---
2	422	402	412	198	170	180	512	496	502	---	---	---
3	416	382	395	320	192	218	496	470	486	---	---	---
4	434	378	402	246	208	228	482	468	478	---	---	---
5	434	376	401	298	238	254	472	444	461	---	---	---
6	456	388	424	324	262	280	458	314	422	---	---	---
7	414	392	400	330	270	305	348	320	338	---	---	---
8	420	386	405	302	256	290	350	314	339	---	---	---
9	418	392	404	330	282	310	346	248	300	---	---	---
10	440	394	412	346	292	305	342	226	305	---	---	---
11	400	380	389	322	278	302	392	242	299	---	---	---
12	398	380	390	304	262	281	302	254	284	344	336	339
13	412	360	390	302	268	280	272	218	239	344	326	335
14	452	366	398	320	290	304	286	248	269	332	318	324
15	454	380	400	332	316	324	320	276	297	372	306	326
16	490	444	462	328	318	323	378	282	329	400	250	332
17	516	470	480	342	320	330	382	320	359	242	230	237
18	566	512	532	344	338	341	340	298	319	256	236	247
19	546	494	520	348	336	343	342	282	306	254	248	251
20	510	448	490	348	340	344	384	292	330	258	250	253
21	528	482	505	350	336	344	400	382	392	264	254	260
22	476	442	457	352	332	341	402	392	396	278	264	271
23	412	340	373	370	342	353	398	374	386	284	274	279
24	332	262	294	370	362	366	378	300	357	294	282	287
25	264	194	237	372	252	355	356	234	309	298	278	290
26	182	142	164	364	338	350	380	332	364	284	212	256
27	164	150	156	458	370	420	372	362	366	262	176	210
28	206	166	182	492	460	478	364	354	358	198	180	189
29	208	166	176	502	490	497	358	346	352	190	184	188
30	190	166	176	516	496	505	352	344	347	200	188	195
31	---	---	---	518	506	513	350	344	347	---	---	---
MONTH	566	142	374	518	170	331	514	218	360			
YEAR	610	44	258									

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	7.3	7.3	7.6	7.6	7.3	7.3	---	---	---	---
2	---	---	7.3	7.2	7.6	7.5	7.3	7.3	---	---	---	---
3	---	---	7.3	7.3	7.5	7.4	7.3	7.2	---	---	7.1	7.1
4	---	---	7.3	7.3	7.5	7.4	7.2	7.2	7.2	7.2	7.2	7.1
5	---	---	7.4	7.3	7.4	7.4	7.2	7.2	7.2	7.2	7.2	7.1
6	---	---	7.4	7.4	7.4	7.4	7.2	7.2	7.3	7.2	7.1	7.0
7	---	---	7.4	7.4	7.4	6.9	7.2	7.2	---	---	7.1	7.1
8	---	---	7.4	7.4	7.0	7.0	7.2	7.2	---	---	7.2	7.1
9	---	---	7.4	7.4	7.1	7.0	7.3	7.2	7.2	7.2	7.2	7.2
10	---	---	7.4	7.4	7.1	7.1	7.2	7.1	---	---	7.2	7.2
11	---	---	7.4	7.4	7.1	7.1	7.2	7.2	---	---	7.2	7.2
12	---	---	7.5	7.4	7.1	7.1	7.2	7.1	---	---	7.3	7.2
13	---	---	7.5	7.5	7.2	7.1	7.1	7.1	---	---	7.2	6.9
14	---	---	7.5	7.5	7.2	7.1	7.1	7.1	---	---	7.0	6.9
15	---	---	7.5	7.4	7.2	7.1	7.3	7.1	---	---	7.1	7.0
16	---	---	7.6	7.5	7.2	7.1	7.2	7.2	---	---	7.1	7.0
17	---	---	7.5	7.4	7.2	7.2	7.2	7.1	---	---	7.1	7.1
18	---	---	7.5	7.4	7.2	7.2	7.1	7.1	---	---	7.2	7.1
19	---	---	7.5	7.4	7.2	7.2	7.1	7.0	---	---	7.2	7.1
20	---	---	7.5	7.5	7.2	7.2	7.1	7.1	---	---	7.2	7.2
21	7.2	7.2	7.5	7.5	7.4	7.3	7.1	7.1	---	---	7.3	7.2
22	7.3	7.2	7.5	7.5	7.5	7.4	7.3	7.1	---	---	7.3	7.2
23	7.3	7.3	7.5	7.5	7.5	7.4	7.1	7.1	---	---	7.3	7.3
24	7.3	7.2	7.6	7.5	7.4	7.4	7.1	7.1	---	---	7.3	7.3
25	7.2	7.0	7.6	7.5	7.4	7.3	7.1	7.1	---	---	7.3	7.2
26	7.0	6.9	7.5	7.5	7.3	7.2	7.4	7.1	---	---	7.3	7.2
27	7.1	7.0	7.5	7.5	7.3	7.2	7.2	7.1	---	---	7.3	7.2
28	7.1	7.1	7.5	7.4	7.3	7.2	7.3	7.2	---	---	7.3	7.3
29	7.2	7.2	7.5	7.4	7.3	7.2	---	---	---	---	7.3	7.3
30	7.2	7.2	7.6	7.4	7.3	7.3	---	---	---	---	7.3	7.2
31	7.3	7.2	---	---	7.3	7.2	---	---	---	---	7.4	7.2
MONTH	7.3	6.9	7.6	7.2	7.6	6.9	7.4	7.0	7.3	7.2	7.4	6.9

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.3	7.2	7.1	7.1	7.7	7.5	7.2	6.9	7.8	7.6	---	---
2	7.3	7.2	7.2	7.1	7.6	7.3	7.3	7.1	7.8	7.6	---	---
3	7.4	7.1	7.2	7.1	7.6	7.4	---	---	7.8	7.6	---	---
4	7.1	6.5	7.2	7.1	7.6	7.4	---	---	7.7	7.6	---	---
5	6.8	6.6	7.3	7.2	7.7	7.5	---	---	7.7	7.6	---	---
6	---	---	7.3	7.3	7.7	7.6	7.2	7.1	7.6	7.3	---	---
7	---	---	7.3	7.3	7.7	7.4	7.3	7.0	7.5	7.3	---	---
8	---	---	7.3	7.3	7.7	7.4	7.4	7.1	7.5	7.3	---	---
9	---	---	7.3	7.3	7.7	7.4	7.6	7.3	7.4	7.2	---	---
10	---	---	7.4	7.3	7.6	7.5	7.7	7.4	7.3	7.0	---	---
11	---	---	7.5	7.4	7.6	7.5	7.7	7.4	7.1	6.9	---	---
12	---	---	7.5	7.4	7.6	7.5	7.6	7.4	7.2	7.0	7.3	7.3
13	---	---	7.5	7.4	7.5	7.3	7.7	7.3	7.1	7.0	7.3	7.2
14	---	---	7.5	7.4	7.4	7.3	7.7	7.3	7.1	7.0	7.3	7.2
15	---	---	7.5	7.4	7.3	7.1	7.7	7.4	7.1	7.0	7.5	7.2
16	---	---	7.5	7.4	7.9	7.3	7.8	7.4	7.2	7.1	7.5	7.0
17	---	---	7.6	7.5	7.5	7.4	7.7	7.5	7.3	7.2	7.2	7.1
18	---	---	7.7	7.5	7.6	7.3	7.7	7.5	7.2	7.1	7.3	7.2
19	7.3	7.2	7.7	7.4	7.6	7.3	7.5	7.4	7.2	7.2	7.3	7.3
20	7.4	7.1	7.8	7.5	7.4	7.2	7.6	7.4	7.3	7.2	7.3	7.3
21	7.2	7.2	7.8	7.5	7.3	7.2	7.5	7.4	7.5	7.2	7.4	7.3
22	7.2	7.2	7.7	7.5	7.3	7.3	7.5	7.4	7.7	7.4	7.3	7.3
23	7.2	7.1	7.7	7.5	7.3	7.1	7.5	7.3	7.9	7.4	7.4	7.3
24	7.1	7.0	7.7	7.5	7.2	7.2	7.5	7.4	7.7	7.2	7.4	7.3
25	7.1	7.1	7.7	7.4	7.4	7.0	7.7	7.2	7.3	7.1	7.3	7.3
26	7.1	7.1	7.6	7.4	6.9	6.7	7.3	7.0	7.4	7.2	7.3	6.9
27	7.2	7.1	7.6	7.4	7.1	7.0	7.4	7.3	7.4	7.2	7.1	6.8
28	7.2	7.2	8.0	7.4	7.1	7.1	7.7	7.4	7.4	7.2	7.1	7.0
29	7.2	7.1	7.9	7.5	7.2	7.1	7.6	7.4	7.6	7.2	7.1	7.1
30	7.1	7.0	7.8	7.5	7.1	7.1	7.7	7.4	7.7	7.2	7.2	7.1
31	---	---	7.9	7.5	---	---	7.7	7.5	7.5	7.3	---	---
MONTH	7.4	6.5	8.0	7.1	7.9	6.7	7.8	6.9	7.9	6.9	7.5	6.8
YEAR	8.0	6.5										

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	9.5	9.0	9.0	3.0	1.5	2.0	0.5	0.0	0.5
2	---	---	---	9.0	8.0	8.5	2.0	1.5	1.5	0.5	0.0	0.5
3	---	---	---	8.5	8.0	8.5	2.0	1.5	1.5	0.5	0.5	0.5
4	---	---	---	8.5	7.5	8.0	2.0	1.0	1.5	0.5	0.5	0.5
5	---	---	---	7.0	6.0	7.0	2.0	1.0	1.5	0.5	0.5	0.5
6	---	---	---	6.5	5.5	6.0	2.5	1.5	2.0	0.5	0.5	0.5
7	---	---	---	6.5	5.5	6.0	6.5	2.5	5.0	0.5	0.5	0.5
8	---	---	---	6.0	5.0	5.5	6.5	4.5	6.0	0.5	0.5	0.5
9	---	---	---	6.0	5.0	5.5	4.5	3.0	3.5	1.0	0.5	0.5
10	---	---	---	7.0	5.5	6.0	3.0	2.5	3.0	1.5	1.0	1.0
11	---	---	---	6.0	5.5	5.5	5.0	3.5	4.0	1.0	0.5	0.5
12	---	---	---	5.5	5.0	5.5	7.0	5.0	6.0	0.5	0.5	0.5
13	---	---	---	5.0	4.0	4.5	7.0	6.5	7.0	0.5	0.0	0.5
14	---	---	---	4.0	3.5	3.5	6.5	4.5	5.0	0.5	0.5	0.5
15	---	---	---	3.5	3.5	3.5	5.0	4.5	4.5	1.0	0.5	0.5
16	---	---	---	5.0	4.0	4.5	5.0	5.0	5.0	1.5	0.5	1.0
17	---	---	---	5.0	4.0	4.5	5.0	4.5	5.0	0.5	0.0	0.5
18	---	---	---	5.5	4.0	5.0	5.0	4.5	4.5	0.5	0.5	0.5
19	---	---	---	6.0	5.0	5.5	5.0	4.0	4.5	0.5	0.0	0.5
20	---	---	---	6.0	5.5	5.5	5.5	5.0	5.0	0.5	0.5	0.5
21	11.5	10.5	11.0	5.5	5.0	5.5	5.0	2.5	3.5	0.5	0.5	0.5
22	11.0	10.0	10.5	5.0	4.5	4.5	2.5	1.0	1.5	0.5	0.5	0.5
23	10.0	9.0	9.5	4.5	3.5	4.0	1.5	0.5	1.5	0.5	0.5	0.5
24	10.5	10.0	10.0	4.0	3.5	4.0	1.0	0.5	1.0	0.5	0.5	0.5
25	12.5	10.5	11.0	5.0	3.0	4.0	1.0	0.5	0.5	0.5	0.5	0.5
26	13.0	11.5	12.5	5.5	4.5	5.0	1.5	0.5	1.0	0.5	0.5	0.5
27	11.0	9.5	10.0	7.5	5.5	6.5	2.0	1.5	1.5	0.5	0.5	0.5
28	9.5	8.0	8.5	7.5	7.0	7.5	3.0	2.0	2.5	0.5	0.5	0.5
29	8.0	7.0	7.5	7.0	4.5	6.0	3.0	2.0	2.5	---	---	---
30	8.0	7.5	7.5	4.5	3.0	3.5	2.0	1.0	1.5	---	---	---
31	9.0	8.0	8.5	---	---	---	1.5	0.5	1.0	---	---	---
MONTH				9.5	3.0	5.5	7.0	0.5	3.0	1.5	0.0	0.5
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	13.5	12.0	12.5	17.0	15.5	16.0
2	---	---	---	---	---	---	13.5	12.5	13.0	17.5	16.5	17.0
3	---	---	---	4.5	4.0	4.5	15.0	13.5	14.0	17.5	16.5	17.0
4	1.0	0.5	1.0	7.5	5.0	6.0	14.0	11.0	12.0	17.5	17.0	17.0
5	0.5	0.5	0.5	8.0	7.5	8.0	12.0	10.5	11.5	18.5	17.0	18.0
6	1.0	0.0	0.5	7.5	7.0	7.0	---	---	---	19.5	18.0	18.5
7	---	---	---	7.0	6.0	6.5	---	---	---	19.5	19.0	19.5
8	---	---	---	6.5	5.5	6.0	11.5	11.0	11.0	20.5	19.0	19.5
9	1.0	0.5	1.0	7.5	6.0	7.0	12.0	10.5	11.5	20.0	18.5	19.5
10	---	---	---	8.5	7.0	8.0	13.0	11.5	12.0	19.0	17.5	18.0
11	---	---	---	10.0	8.5	9.5	14.5	12.5	13.5	18.5	16.5	17.5
12	---	---	---	11.5	10.0	10.5	---	---	---	18.5	16.0	17.0
13	---	---	---	11.5	10.0	11.0	---	---	---	19.5	16.0	17.5
14	---	---	---	17.0	11.0	13.5	---	---	---	19.5	17.0	18.0
15	---	---	---	18.0	10.5	12.5	---	---	---	20.5	17.5	19.0
16	---	---	---	13.0	11.5	12.0	---	---	---	21.0	18.5	19.5
17	---	---	---	11.5	10.5	11.0	---	---	---	21.5	19.5	20.5
18	---	---	---	12.5	10.5	11.5	---	---	---	22.0	20.0	21.0
19	---	---	---	11.5	10.5	11.0	18.5	18.0	18.5	22.5	20.0	21.0
20	---	---	---	11.0	10.0	10.5	19.5	18.0	18.5	23.0	21.0	22.0
21	---	---	---	11.0	9.5	10.0	19.5	18.5	19.0	24.0	21.5	22.5
22	---	---	---	9.5	8.5	9.0	19.0	18.5	19.0	23.0	22.0	22.5
23	---	---	---	8.0	7.0	8.0	18.5	17.5	18.0	23.0	21.5	22.0
24	---	---	---	8.5	7.5	8.0	17.0	15.5	16.0	23.0	21.5	22.0
25	---	---	---	9.5	7.5	8.5	15.5	14.0	14.5	23.0	21.0	21.5
26	---	---	---	10.5	8.5	9.5	14.0	13.5	13.5	24.0	21.5	22.5
27	---	---	---	11.5	10.0	11.0	14.0	12.5	13.5	24.0	22.5	23.0
28	---	---	---	13.0	11.5	12.0	14.5	13.5	14.0	24.0	22.5	23.5
29	---	---	---	14.5	12.5	13.5	14.5	13.5	14.0	24.5	22.5	23.5
30	---	---	---	17.0	14.5	15.5	15.5	14.0	15.0	24.5	22.5	23.5
31	---	---	---	17.0	13.5	15.5	---	---	---	25.5	23.0	24.5
MONTH				18.0	4.0	10.0				25.5	15.5	20.0

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	23.5	24.5	26.0	24.5	25.0	27.0	25.0	26.0	---	---	---
2	25.0	23.0	24.0	26.0	24.5	25.5	27.5	25.0	26.0	---	---	---
3	25.5	23.5	24.5	26.0	24.5	25.0	27.0	25.5	26.5	---	---	---
4	26.0	23.0	24.0	27.0	24.5	25.5	28.0	25.0	26.5	---	---	---
5	26.5	23.5	24.5	27.5	25.0	26.0	26.5	25.5	26.0	---	---	---
6	25.5	23.5	24.5	28.0	25.5	27.0	27.0	23.0	25.5	---	---	---
7	24.5	22.5	23.5	29.0	26.0	27.5	27.0	23.5	25.0	---	---	---
8	23.5	21.5	22.5	30.0	26.5	28.0	27.5	25.0	26.0	---	---	---
9	22.5	21.0	22.0	29.5	27.0	28.0	25.0	23.5	24.0	---	---	---
10	23.0	21.0	22.0	29.5	27.5	28.0	25.5	23.0	24.5	---	---	---
11	24.0	20.5	22.0	29.0	27.0	27.5	24.0	23.0	23.5	---	---	---
12	24.0	21.5	22.5	27.5	26.5	27.0	24.5	23.5	24.0	22.0	21.5	21.5
13	25.0	22.5	23.0	29.0	26.0	27.0	24.5	23.0	23.5	22.0	21.0	21.5
14	23.5	22.5	23.0	29.5	26.5	28.0	24.0	23.5	23.5	21.5	21.0	21.0
15	24.5	22.0	23.0	30.5	27.5	29.0	24.5	23.0	24.0	22.5	21.0	21.5
16	25.5	23.0	24.0	31.0	27.5	29.0	25.0	23.5	24.5	22.0	21.0	21.0
17	25.0	24.0	24.5	31.5	27.5	29.0	25.0	24.5	24.5	21.0	20.5	20.5
18	26.0	23.5	24.5	31.0	28.0	29.5	25.0	23.5	24.0	22.0	21.0	21.5
19	25.5	24.0	24.5	30.5	27.5	29.0	24.5	23.5	24.0	22.0	21.0	21.5
20	25.0	23.5	24.0	31.0	27.5	29.0	25.0	22.5	23.5	22.0	21.0	21.5
21	25.5	24.0	24.5	30.0	27.5	29.0	24.5	22.5	23.5	22.0	21.0	21.5
22	24.0	24.0	24.0	28.5	27.5	28.0	26.0	23.0	24.0	22.0	20.5	21.0
23	24.5	24.0	24.5	30.5	27.0	28.5	26.0	23.5	25.0	22.5	20.0	21.0
24	24.5	23.5	24.0	28.5	27.0	27.5	25.0	22.0	24.0	21.5	21.0	21.0
25	24.0	22.0	23.0	27.0	24.0	26.5	24.5	23.0	24.0	21.5	20.5	21.0
26	21.5	20.5	21.0	26.5	25.5	26.0	26.0	24.0	24.5	20.5	19.5	20.0
27	22.0	20.5	21.5	26.5	25.0	25.5	26.5	24.0	25.0	19.5	19.0	19.0
28	23.5	22.0	23.0	26.0	24.5	25.5	27.5	24.5	26.0	19.0	18.0	18.5
29	24.0	23.5	23.5	25.5	24.5	25.0	28.0	24.5	26.0	18.5	17.5	18.0
30	25.5	23.5	24.5	27.0	24.5	25.5	28.5	25.0	26.5	17.5	17.0	17.5
31	---	---	---	28.0	24.5	26.0	27.0	25.5	26.0	---	---	---
MONTH	26.5	20.5	23.5	31.5	24.0	27.0	28.5	22.0	25.0			
YEAR	31.5	0.0	14.5									

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	11.1	10.6	10.8	12.5	11.9	12.3	12.7	12.3	12.5
2	---	---	---	11.6	10.8	11.2	12.7	12.3	12.5	12.4	11.7	12.1
3	---	---	---	11.6	11.0	11.3	12.7	12.3	12.5	12.2	11.5	11.9
4	---	---	---	11.6	11.1	11.3	12.6	12.2	12.4	11.9	11.1	11.5
5	---	---	---	11.9	11.3	11.6	12.6	12.0	12.2	11.5	11.0	11.3
6	---	---	---	12.1	11.7	11.9	14.4	12.0	13.3	11.4	10.7	11.0
7	---	---	---	12.3	11.6	12.0	13.8	10.7	12.0	11.2	10.7	11.0
8	---	---	---	12.3	11.7	12.0	11.8	10.7	11.2	11.2	11.0	11.1
9	---	---	---	12.3	11.8	12.1	12.5	11.7	12.0	11.5	11.0	11.2
10	---	---	---	12.2	11.9	12.1	12.0	11.4	11.6	11.9	11.3	11.5
11	---	---	---	12.4	12.0	12.2	11.6	11.2	11.4	12.2	11.8	12.0
12	---	---	---	12.4	12.0	12.2	11.8	10.3	10.8	13.1	12.4	12.7
13	---	---	---	12.6	12.1	12.4	10.6	10.0	10.3	13.3	13.0	13.2
14	---	---	---	12.8	12.5	12.7	11.2	10.4	10.9	13.0	12.3	12.6
15	---	---	---	12.8	12.5	12.7	11.2	10.6	10.9	12.7	11.9	12.4
16	---	---	---	13.0	12.7	12.8	11.2	10.3	10.7	12.7	12.2	12.5
17	---	---	---	13.0	12.7	12.9	11.2	10.5	10.8	13.4	13.0	13.2
18	---	---	---	13.0	12.5	12.8	11.3	10.8	11.1	13.7	13.3	13.5
19	---	---	---	12.8	12.2	12.5	11.3	10.6	11.0	13.9	13.1	13.5
20	---	---	---	12.9	12.2	12.5	11.1	10.5	10.8	13.4	12.9	13.2
21	10.6	9.5	10.3	12.5	12.2	12.4	11.2	10.8	11.0	13.3	12.8	13.1
22	11.7	10.8	11.2	12.7	12.4	12.6	11.5	11.2	11.3	13.4	12.9	13.1
23	11.9	11.7	11.8	12.8	12.5	12.7	12.5	12.2	12.4	13.4	12.9	13.1
24	12.1	11.9	12.0	12.9	12.6	12.8	12.6	12.3	12.4	13.3	12.7	13.0
25	12.1	7.0	10.7	13.1	12.6	12.8	12.8	11.0	12.5	13.1	12.7	12.9
26	7.6	7.0	7.3	12.8	12.2	12.5	12.9	12.0	12.5	13.1	12.7	12.9
27	9.5	7.2	7.8	12.4	11.7	12.1	12.4	11.8	12.1	13.2	12.9	13.0
28	11.0	9.1	10.0	11.9	11.2	11.5	12.8	12.0	12.4	13.5	13.2	13.3
29	11.7	11.1	11.4	11.7	10.8	11.2	12.7	12.3	12.5	---	---	---
30	11.8	11.2	11.5	12.0	11.3	11.6	12.6	12.1	12.3	---	---	---
31	11.4	10.7	11.0	---	---	---	12.6	11.9	12.4	---	---	---
MONTH				13.1	10.6	12.1	14.4	10.0	11.8	13.9	10.7	12.4

03408500 NEW RIVER AT NEW RIVER, TN--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	11.0	9.5	10.0	9.3	8.9	9.1
2	---	---	---	---	---	---	10.0	9.1	9.5	9.1	8.9	9.0
3	---	---	---	11.9	11.5	11.7	9.6	7.3	8.4	9.2	8.9	9.0
4	13.8	13.1	13.4	11.5	10.6	11.1	10.2	8.4	9.4	9.2	8.9	9.0
5	13.7	12.8	13.3	10.6	10.2	10.4	10.5	10.2	10.4	8.9	8.6	8.7
6	13.8	12.8	13.3	10.9	10.4	10.7	---	---	---	8.6	8.3	8.5
7	---	---	---	11.0	10.7	10.9	---	---	---	8.4	8.3	8.4
8	---	---	---	11.2	10.8	11.0	10.9	10.6	10.8	8.5	8.3	8.4
9	13.6	12.7	13.0	11.0	10.7	10.8	14.3	10.8	11.7	8.4	8.3	8.4
10	---	---	---	10.9	10.5	10.7	13.2	10.1	10.9	8.8	8.4	8.6
11	---	---	---	10.9	10.5	10.7	10.2	9.4	9.9	9.5	9.0	9.3
12	---	---	---	11.0	10.1	10.6	---	---	---	10.1	9.6	9.8
13	---	---	---	10.2	7.0	8.7	---	---	---	11.5	10.3	10.8
14	---	---	---	8.3	7.3	7.7	---	---	---	11.0	10.5	10.6
15	---	---	---	10.1	8.4	9.2	---	---	---	10.9	10.5	10.7
16	---	---	---	10.4	9.7	10.0	---	---	---	11.2	10.7	10.9
17	---	---	---	10.4	10.1	10.2	---	---	---	11.3	10.8	11.0
18	---	---	---	11.1	10.1	10.4	---	---	---	11.4	10.8	11.1
19	---	---	---	13.1	10.5	11.9	8.7	8.6	8.6	11.5	10.8	11.2
20	---	---	---	10.6	10.3	10.4	8.6	8.4	8.5	11.5	10.9	11.2
21	---	---	---	10.8	10.2	10.5	8.4	8.3	8.4	11.3	10.6	10.9
22	---	---	---	11.2	10.6	10.8	8.3	8.2	8.3	10.8	9.9	10.3
23	---	---	---	11.5	10.9	11.2	8.5	8.2	8.3	10.1	9.0	9.5
24	---	---	---	11.7	11.0	11.3	9.0	8.5	8.9	9.2	8.4	8.9
25	---	---	---	11.6	10.7	11.3	9.4	9.0	9.3	8.9	8.2	8.3
26	---	---	---	11.3	10.3	10.9	10.2	9.2	9.6	12.1	9.0	10.5
27	---	---	---	10.9	10.0	10.5	10.7	9.8	10.3	10.2	9.1	9.5
28	---	---	---	10.4	9.6	10.1	10.9	9.6	10.2	10.4	9.5	9.9
29	---	---	---	11.1	10.4	10.8	10.4	9.5	10.0	10.4	9.6	10.0
30	---	---	---	11.7	10.8	11.2	10.5	9.1	9.9	10.5	9.5	9.8
31	---	---	---	11.4	9.0	10.0	---	---	---	10.3	9.6	10.1
MONTH				13.1	7.0	10.5				12.1	8.2	9.7
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.9	8.7	9.2	7.6	7.3	7.5	8.4	8.1	8.2	---	---	---
2	9.0	8.1	8.4	7.6	7.5	7.5	8.3	8.1	8.2	---	---	---
3	8.1	7.8	8.1	7.7	7.5	7.6	8.1	7.9	8.0	---	---	---
4	8.2	7.9	8.1	7.8	7.5	7.7	8.5	7.8	8.2	---	---	---
5	8.3	8.1	8.2	7.9	7.5	7.7	8.6	8.3	8.4	---	---	---
6	8.3	8.2	8.3	7.7	7.4	7.6	8.3	7.5	7.9	---	---	---
7	8.4	7.9	8.1	7.6	7.2	7.4	8.1	7.4	7.8	---	---	---
8	8.6	7.9	8.3	7.7	7.1	7.4	8.4	7.5	7.9	---	---	---
9	8.6	7.8	8.2	7.9	7.3	7.6	8.3	7.5	7.9	---	---	---
10	8.5	8.1	8.3	8.1	7.5	7.8	7.8	6.6	7.2	---	---	---
11	8.4	8.3	8.3	8.2	7.5	7.9	7.8	7.6	7.7	---	---	---
12	8.5	8.3	8.4	8.0	7.6	7.8	7.7	7.5	7.7	8.1	8.0	8.0
13	8.4	8.1	8.3	8.3	7.3	7.7	7.9	7.5	7.6	8.1	7.7	8.0
14	8.2	7.9	8.1	8.0	7.2	7.6	7.7	7.5	7.6	8.1	7.7	7.9
15	8.1	7.1	7.6	8.3	7.4	7.8	7.7	7.4	7.5	8.4	7.8	8.2
16	8.6	7.7	8.2	8.1	7.6	7.9	7.9	7.8	7.8	8.4	8.1	8.3
17	8.5	7.9	8.2	8.0	7.6	7.7	7.7	7.7	7.7	8.7	8.3	8.6
18	8.4	7.6	8.0	7.7	7.3	7.5	7.8	7.6	7.7	8.7	8.5	8.6
19	8.7	7.8	8.2	7.5	7.3	7.4	8.0	7.8	7.9	8.5	8.3	8.4
20	7.8	7.4	7.6	7.5	7.3	7.4	8.2	7.8	8.0	8.3	8.3	8.3
21	7.8	7.6	7.7	7.6	7.3	7.5	8.7	7.8	8.2	8.4	8.3	8.3
22	8.0	7.9	8.0	7.6	7.3	7.5	9.0	8.1	8.5	8.5	8.3	8.4
23	7.9	7.5	7.7	7.5	7.2	7.4	9.2	8.3	8.7	8.6	8.3	8.5
24	7.6	7.5	7.5	7.5	7.2	7.3	8.9	7.5	8.4	8.6	8.3	8.4
25	8.0	7.5	7.7	7.9	6.8	7.1	7.9	7.5	7.7	8.4	8.1	8.2
26	7.6	6.0	6.9	7.3	5.6	6.8	8.1	7.6	7.8	8.5	7.7	8.2
27	7.9	7.3	7.8	7.9	7.3	7.6	8.3	7.5	7.9	8.8	7.4	8.1
28	8.0	7.6	7.8	8.5	7.5	7.9	8.1	7.4	7.8	9.0	8.8	9.0
29	8.0	7.9	7.9	8.2	7.6	7.8	8.2	7.3	7.7	9.3	9.0	9.2
30	7.8	7.6	7.7	8.5	7.5	8.0	8.4	7.2	7.7	9.3	9.2	9.3
31	---	---	---	8.4	8.1	8.2	7.9	7.4	7.6	---	---	---
MONTH	9.9	6.0	8.0	8.5	5.6	7.6	9.2	6.6	7.9			
YEAR	14.4	5.6	9.9									

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1							---	---	---	7	1	2
2							---	---	---	40	1	6
3							---	---	---	10	1	3
4							---	---	---	5	1	4
5							---	---	---	2	1	2
6							---	---	---	6	1	2
7							---	---	---	20	3	10
8							---	---	---	20	4	10
9							75	20	30	20	6	10
10							50	8	25	85	4	45
11							20	1	6	100	65	80
12							130	2	15	55	10	25
13							55	25	40	10	1	5
14							50	15	25	10	1	3
15							20	8	10	140	15	65
16							10	3	7	150	30	70
17							10	1	4	30	10	15
18							3	1	1	25	4	10
19							8	1	5	4	1	4
20							7	1	5	7	2	4
21							7	1	3	8	6	7
22							8	3	5	10	5	7
23							4	1	3	9	8	9
24							5	1	3	9	6	9
25							5	1	3	10	7	9
26							35	1	20	10	6	8
27							40	20	30	9	1	6
28							35	10	25	10	1	7
29							10	1	7	---	---	---
30							5	1	2	---	---	---
31							7	1	3	---	---	---
MONTH										150	1	15

DAY	FEBRUARY MAX	FEBRUARY MIN	FEBRUARY MEAN	MARCH MAX	MARCH MIN	MARCH MEAN	APRIL MAX	APRIL MIN	APRIL MEAN	MAY MAX	MAY MIN	MAY MEAN
1	---	---	---	---	---	---	290	55	110	85	40	55
2	---	---	---	---	---	---	75	30	45	40	15	20
3	---	---	---	30	10	20	---	95	---	35	15	25
4	2	1	1	140	15	50	---	---	---	25	8	15
5	3	1	1	490	75	230	---	---	---	15	9	10
6	40	1	5	70	30	40	---	---	---	15	10	15
7	---	---	---	30	15	20	---	---	---	15	9	10
8	---	---	---	25	15	20	60	45	50	10	6	9
9	4	3	4	20	10	10	45	30	35	7	5	6
10	---	---	---	15	7	10	45	15	25	20	5	10
11	---	---	---	10	4	6	85	10	40	25	20	25
12	---	---	---	210	4	25	---	---	---	25	15	20
13	---	---	---	---	320	---	---	---	---	20	15	20
14	---	---	---	280	55	140	---	---	---	20	15	15
15	---	---	---	65	35	50	---	---	---	20	15	15
16	---	---	---	45	25	35	---	---	---	20	10	15
17	---	---	---	30	15	20	---	---	---	15	15	15
18	---	---	---	15	6	10	---	---	---	15	10	15
19	---	---	---	20	10	15	8	2	4	15	10	15
20	---	---	---	35	15	20	25	2	10	15	15	15
21	---	---	---	25	15	15	25	1	15	15	10	15
22	---	---	---	25	15	15	3	2	3	15	15	15
23	---	---	---	15	9	10	130	3	35	20	15	15
24	---	---	---	10	5	9	250	130	170	20	15	15
25	---	---	---	9	7	8	230	85	160	30	20	25
26	---	---	---	9	7	8	75	20	40	20	15	20
27	---	---	---	10	5	8	25	15	20	20	15	15
28	---	---	---	7	5	5	45	9	15	25	15	20
29	---	---	---	8	5	6	120	10	55	45	15	25
30	---	---	---	55	5	15	140	90	110	45	15	25
31	---	---	---	---	45	---	---	---	---	20	15	15
MONTH				490	4	30				85	5	15

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25	15	20	140	90	110	35	15	20	---	---	---
2	25	15	25	120	70	95	20	15	20	---	---	---
3	25	15	15	85	40	60	20	15	15	---	---	---
4	35	3	20	65	45	55	20	15	20	---	---	---
5	15	10	15	60	40	50	25	15	20	---	---	---
6	20	10	15	65	45	55	950	20	140	---	---	---
7	20	15	20	55	40	50	350	50	160	---	---	---
8	25	20	25	50	30	40	100	30	45	---	---	---
9	35	20	25	35	25	30	160	45	85	---	---	---
10	25	20	20	30	20	25	550	50	140	---	---	---
11	50	20	20	30	25	25	500	130	320	---	---	---
12	20	15	20	65	25	35	300	160	210	130	120	140
13	50	10	15	60	40	45	410	140	280	140	100	120
14	60	20	50	70	30	50	150	95	120	110	90	100
15	70	20	60	30	20	25	150	85	110	120	80	100
16	40	15	30	45	15	25	130	70	90	---	90	---
17	50	10	30	25	10	20	160	70	90	---	250	---
18	25	10	20	20	10	15	250	75	130	240	160	190
19	35	15	30	15	10	15	140	65	110	170	100	140
20	60	25	50	15	10	15	130	60	95	110	90	100
21	35	25	30	15	10	15	65	40	50	100	80	95
22	---	---	---	15	15	15	40	30	35	95	65	80
23	65	25	40	20	15	15	30	20	25	80	50	65
24	190	75	120	20	15	15	270	25	65	65	50	55
25	---	140	---	430	15	45	400	50	150	70	50	55
26	---	---	---	110	35	65	55	35	45	---	70	---
27	---	150	---	55	25	35	40	30	35	---	700	---
28	600	130	350	30	20	25	45	35	40	---	470	---
29	550	230	350	30	20	25	45	35	40	410	100	190
30	250	130	180	25	15	20	55	35	40	100	70	85
31	---	---	---	85	15	20	40	35	35	---	---	---
MONTH	600	3	60	430	10	35	950	15	90			
YEAR	950	1	45									

OXIDATION REDUCTION POTENTIAL (MILLIVOLTS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1							---	---	---	522	493	504
2							---	---	---	493	483	487
3							---	---	---	483	469	476
4							---	---	---	471	464	469
5							---	---	---	470	462	466
6							---	---	---	464	459	461
7							---	---	---	467	458	462
8							---	---	---	468	465	466
9							437	402	418	467	455	462
10							458	440	450	471	454	461
11							460	448	453	478	471	476
12							457	446	452	481	475	478
13							454	445	449	619	479	520
14							447	437	443	630	617	623
15							445	435	439	620	604	615
16							449	443	446	604	579	591
17							458	449	454	578	566	570
18							465	458	462	567	540	553
19							465	460	462	536	528	532
20							463	455	460	527	511	518
21							454	451	453	512	506	508
22							454	451	452	507	496	501
23							424	397	413	496	472	491
24							428	421	424	491	482	487
25							779	413	425	482	477	479
26							427	417	423	479	435	478
27							447	425	434	474	471	472
28							601	444	501	473	470	471
29							620	603	610	---	---	---
30							616	544	580	---	---	---
31							547	523	536	---	---	---
MONTH										630	435	503

03408500 NEW RIVER AT NEW RIVER, TN--Continued

OXIDATION REDUCTION POTENTIAL (MILLIVOLTS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1				---	---	---	288	216	244	438	352	421
2				---	---	---	215	170	190	433	381	423
3				434	342	395	346	138	216	435	375	416
4				585	388	457	372	184	271	439	349	407
5				628	559	604	---	---	---	399	326	373
6				628	542	596	---	---	---	393	320	375
7				594	486	525	---	---	---	402	320	375
8				608	498	561	---	---	---	424	365	403
9				573	522	548	---	---	---	427	375	414
10				568	466	520	---	---	---	504	360	381
11				518	476	492	---	---	---	479	413	452
12				515	438	481	---	---	---	478	307	411
13				604	510	550	---	---	---	473	310	392
14				503	313	433	---	---	---	685	480	634
15				514	321	413	---	---	---	606	558	582
16				568	420	497	---	---	---	628	555	588
17				523	295	443	---	---	---	696	424	602
18				300	187	236	---	---	---	---	---	---
19				220	170	189	328	274	295	---	---	---
20				215	203	209	280	248	267	---	---	---
21				235	192	204	327	221	296	---	---	---
22				211	194	203	332	319	325	---	---	---
23				209	192	199	390	324	356	---	---	---
24				331	194	250	459	394	435	---	---	---
25				257	230	240	465	381	434	---	---	---
26				240	215	226	601	347	468	---	---	---
27				223	179	213	519	291	392	---	---	---
28				209	179	195	371	305	339	---	---	---
29				199	173	183	384	306	335	---	---	---
30				219	193	206	427	308	356	---	---	---
31				408	177	313	---	---	---	---	---	---
MONTH				628	170	365						
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	264	245	254	---	---	---
2				---	---	---	300	252	277	---	---	---
3				---	---	---	308	281	300	---	---	---
4				---	---	---	287	172	226	---	---	---
5				---	---	---	185	160	167	---	---	---
6				---	---	---	263	189	232	---	---	---
7				---	---	---	311	242	286	---	---	---
8				---	---	---	315	251	289	---	---	---
9				---	---	---	344	286	310	---	---	---
10				---	---	---	385	328	354	---	---	---
11				---	---	---	433	370	397	---	---	---
12				---	---	---	389	291	328	364	349	357
13				---	---	---	333	293	314	391	352	371
14				191	160	170	322	294	312	384	309	357
15				257	196	223	341	314	326	372	292	318
16				231	205	220	343	281	311	369	312	---
17				245	224	235	292	279	284	373	250	---
18				281	242	270	331	292	315	371	276	327
19				301	270	285	348	314	330	382	280	350
20				328	291	310	360	305	339	345	272	300
21				352	288	314	311	255	291	343	258	301
22				287	276	280	266	203	241	335	233	286
23				318	274	294	263	195	228	360	229	301
24				307	287	297	280	205	244	360	258	310
25				289	277	283	348	282	315	361	276	331
26				292	275	285	319	253	288	428	314	---
27				337	290	315	298	242	271	454	700	---
28				321	244	292	307	234	270	470	470	---
29				256	231	245	325	264	292	458	450	454
30				262	233	249	357	283	330	452	305	394
31				253	234	246	334	291	315	---	---	---
MONTH							433	160	291			

03408500 NEW RIVER AT NEW RIVER, TN--Continued

WATER-QUALITY RECORDS

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	244	70	46	789	89	190	335	18	16
2	123	25	8.3	516	28	39	306	8	6.6
3	77	9	1.9	373	17	17	270	2	1.5
4	55	5	0.74	295	12	9.6	237	2	1.3
5	43	2	0.23	236	7	4.5	214	2	1.2
6	36	2	0.19	192	5	2.6	219	20	12
7	36	2	0.19	162	12	5.2	3990	482	6170
8	99	7	1.9	144	18	7.0	2480	165	1100
9	248	75	50	128	12	4.1	1150	42	130
10	372	110	110	118	25	8.0	773	26	54
11	163	40	18	116	17	5.3	603	15	24
12	109	20	5.9	115	8	2.5	845	18	41
13	81	10	2.2	114	5	1.5	1280	48	166
14	63	6	1.0	102	4	1.1	992	38	102
15	53	5	0.72	96	5	1.3	818	13	29
16	46	3	0.37	102	2	0.55	716	11	21
17	43	2	0.23	106	2	0.57	570	8	12
18	39	2	0.21	97	2	0.52	479	4	5.2
19	37	2	0.20	92	2	0.50	400	2	2.2
20	42	2	0.23	90	1	0.24	391	4	4.2
21	78	10	2.1	87	2	0.47	476	9	12
22	110	25	7.4	83	1	0.22	343	6	5.6
23	75	9	1.8	78	1	0.21	370	6	6.0
24	62	6	1.0	72	1	0.19	332	16	14
25	2070	500	2790	69	1	0.19	330	7	6.2
26	4450	850	10200	70	1	0.19	652	20	35
27	925	140	350	82	1	0.22	712	26	50
28	481	60	78	132	2	0.71	634	23	39
29	312	22	19	352	3	2.9	568	12	18
30	277	18	13	439	4	4.7	434	5	5.9
31	953	41	105	---	---	---	554	6	9.0
TOTAL	11802	---	13815.81	5447	---	311.08	22473	---	8099.9
		JANUARY			FEBRUARY			MARCH	
1	439	4	4.7	156	18	7.6	1120	80	242
2	523	6	8.5	142	18	6.9	876	22	52
3	470	4	5.1	143	16	6.2	725	16	31
4	443	2	2.4	161	16	7.0	1350	55	200
5	452	4	4.9	204	15	8.3	2170	304	1840
6	542	7	10	175	11	5.2	1390	62	233
7	702	15	28	134	15	5.4	1030	28	78
8	672	25	45	119	11	3.5	790	27	58
9	664	20	36	118	6	1.9	642	14	24
10	1210	64	209	129	8	2.8	545	14	21
11	1120	80	242	139	10	3.8	479	11	14
12	874	41	97	196	10	5.3	591	15	24
13	754	15	31	640	15	26	7440	1300	26100
14	750	14	28	661	16	29	2300	350	2170
15	1320	81	289	592	12	19	1340	130	470
16	1100	63	187	479	10	13	970	60	157
17	633	22	38	393	10	11	742	25	50
18	834	22	50	394	10	11	658	20	36
19	607	8	13	379	10	10	584	15	24
20	518	17	24	346	10	9.3	655	20	35
21	487	6	7.9	304	10	8.2	650	15	26
22	395	4	4.3	275	10	7.4	643	16	28
23	374	5	5.0	281	10	7.6	606	12	20
24	299	5	4.0	2380	350	2250	541	13	19
25	290	5	3.9	2150	300	1740	496	25	33
26	268	6	4.3	1300	110	386	452	18	22
27	266	4	2.9	1360	130	477	404	15	16
28	267	6	4.3	1510	160	652	372	9	9.0
29	282	20	15	---	---	---	390	19	20
30	223	20	12	---	---	---	666	258	1010
31	186	20	10	---	---	---	2340	1690	10800
TOTAL	17964	---	1426.2	15260	---	5720.4	33957	---	43862.0

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		APRIL			MAY			JUNE	
1	1150	295	916	880	45	107	73	10	2.0
2	853	60	138	673	40	73	57	10	1.5
3	3940	1130	12000	571	35	54	47	10	1.3
4	25000	2350	177000	581	30	47	41	8	0.89
5	26200	2720	262000	475	25	32	36	8	0.78
6	3080	480	3990	403	20	22	34	10	0.92
7	1710	250	1150	339	15	14	34	14	1.3
8	1220	100	329	316	10	8.5	115	23	7.1
9	920	48	119	251	10	6.8	71	19	3.6
10	744	38	76	202	11	6.0	56	14	2.1
11	617	52	87	175	9	4.3	47	14	1.8
12	522	75	106	155	6	2.5	45	22	2.7
13	458	70	87	137	6	2.2	49	22	2.9
14	413	60	67	124	4	1.3	69	21	3.9
15	376	55	56	115	7	2.2	122	32	11
16	334	45	41	106	8	2.3	91	26	6.4
17	295	40	32	97	3	0.79	79	20	4.3
18	264	30	21	86	5	1.2	112	20	6.0
19	249	15	10	80	6	1.3	114	15	4.6
20	226	8	4.9	76	4	0.82	291	34	27
21	205	14	7.7	72	7	1.4	264	26	19
22	192	10	5.2	70	8	1.5	160	13	5.6
23	582	52	118	87	19	4.5	252	32	22
24	2000	234	1280	122	12	4.0	345	92	86
25	1170	168	531	130	12	4.2	894	185	447
26	776	50	105	95	10	2.6	2470	2500	16700
27	575	25	39	89	12	2.9	1040	1500	4210
28	454	18	22	83	10	2.2	571	600	925
29	1190	78	251	78	9	1.9	323	260	227
30	1220	50	165	132	72	26	209	133	75
31	---	---	---	103	16	4.4	---	---	---
TOTAL	76935	---	460753.8	6903	---	444.81	8111	---	22808.69
		JULY			AUGUST			SEPTEMBER	
1	168	84	38	42	12	1.4	38	28	2.9
2	289	77	60	38	12	1.2	114	75	23
3	219	54	32	38	12	1.2	113	48	15
4	137	47	17	32	14	1.2	76	54	11
5	105	43	12	48	11	1.4	95	63	16
6	87	40	9.4	123	375	361	68	25	4.6
7	72	37	7.2	131	458	229	148	19	7.6
8	62	16	2.7	54	48	7.0	601	94	153
9	55	19	2.8	105	65	18	271	132	97
10	46	20	2.5	425	205	235	145	124	49
11	42	24	2.7	652	247	435	101	110	30
12	62	37	6.2	201	145	79	77	80	17
13	51	55	7.6	185	205	102	62	84	14
14	49	81	11	146	107	42	90	78	19
15	41	42	4.6	241	85	55	415	190	213
16	33	58	5.2	250	75	51	1230	497	1950
17	28	32	2.4	187	72	36	906	834	2160
18	25	11	0.74	231	74	46	513	176	244
19	22	12	0.71	170	84	39	311	123	103
20	20	15	0.81	115	76	24	229	95	59
21	18	22	1.1	100	51	14	168	88	40
22	19	59	3.0	66	37	6.6	129	58	20
23	16	22	0.95	52	35	4.9	106	40	11
24	15	19	0.77	160	62	27	88	30	7.1
25	33	43	3.8	380	144	148	94	40	10
26	312	85	72	160	44	19	1320	888	7660
27	162	26	11	97	35	9.2	1960	2370	12800
28	82	16	3.5	70	45	8.5	1560	1040	4180
29	54	17	2.5	56	46	7.0	700	180	340
30	42	18	2.0	52	67	9.4	425	60	69
31	39	13	1.4	41	25	2.8	---	---	---
TOTAL	2405	---	327.58	4648	---	2021.8	12153	---	30325.2
YEAR	218058		589917.3						

03409500 CLEAR FORK NEAR ROBBINS, TN

LOCATION.--Lat 36°23'18", long 84°37'49", Scott County, Hydrologic Unit 05130104, on right bank 300 ft (90 m) downstream from Burnt Mill Bridge, 3.3 mi (5.3 km) northwest of Robbins, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--272 mi^2 (704 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to September 1971, July 1975 to current year. Published as Clear Fork River near Robbins, October 1951 to September 1954.

REVISED RECORDS.--WSP 1306: 1931(M), 1936-37(M), 1943-44(M). WSP 1436: Drainage area. WSP 1910: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 1,081.46 ft (329.629 m) above mean sea level, Sandy Hook datum. Prior to Aug. 10, 1940, nonrecording gage at site 300 ft (90 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--43 years (water years 1930-71, 1975-77), 465 ft^3/s (13.17 m^3/s), 23.22 in/yr (590 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft^3/s (963 m^3/s) Feb. 3, 1939, gage height, 18.5 ft (5.64 m) from floodmarks, site and datum then in use, from rating curve extended above 14,000 ft^3/s (396 m^3/s) on basis of slope-area measurement of peak flow; minimum observed, 0.2 ft^3/s (0.006 m^3/s) Sept. 19-21, 1932; minimum gage height observed, 0.28 ft (0.085 m) Oct. 1-3, 1936, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929 reached a stage of 22.1 ft (6.74 m), former site and datum, from information by local residents, and flood of May 27, 1973, reached a stage of 18.92 ft (5.767 m), present site and datum, from floodmark; discharge, 35,700 ft^3/s (1,010 m^3/s), from rating curve extended above 14,000 ft^3/s (396 m^3/s) on basis of slope area measurement at gage height 18.5 ft (5.64 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft^3/s (184 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0300	11900	337	11.75	3.581	Apr. 4	2030	*27800	787	16.82	5.127

Minimum discharge, 4.7 ft^3/s (0.13 m^3/s) July 24, gage height, 1.08 ft (0.329 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	541	188	305	130	770	337	576	52	80	13	28
2	85	349	183	524	120	617	318	475	40	135	12	108
3	51	252	163	520	120	525	1480	435	34	85	15	100
4	36	200	155	402	130	1460	18600	458	29	52	21	54
5	26	161	140	260	150	1890	14400	363	26	42	34	38
6	21	135	143	349	130	1210	3080	297	24	38	22	30
7	22	117	1050	451	110	857	1650	266	24	31	25	76
8	27	104	1400	541	100	640	1130	300	62	27	21	145
9	83	92	756	451	100	517	807	234	42	23	51	126
10	184	85	509	611	110	431	618	183	34	20	64	78
11	117	83	399	833	143	371	497	157	29	73	96	51
12	76	81	514	833	191	1510	403	140	28	64	76	38
13	55	76	790	833	510	7480	341	124	30	40	46	29
14	43	74	631	663	494	2370	302	111	40	27	30	30
15	36	73	515	915	420	1400	273	100	66	22	88	44
16	30	76	456	700	356	969	240	90	52	18	213	790
17	27	73	365	540	383	702	209	80	46	15	150	902
18	24	68	303	660	312	586	186	74	62	13	138	405
19	21	64	257	450	275	524	170	71	62	10	110	227
20	24	61	249	400	248	559	162	64	140	8.4	63	241
21	27	60	275	350	229	563	152	56	130	6.7	40	161
22	51	57	200	300	205	517	151	51	85	5.8	29	108
23	46	53	223	250	212	464	2620	47	125	5.4	21	81
24	41	49	196	220	989	393	4520	60	160	4.7	53	64
25	291	46	208	200	1360	346	2130	79	440	7.3	131	58
26	1790	47	320	180	889	308	1290	60	1600	21	81	1370
27	600	64	395	170	870	274	863	53	520	88	46	1590
28	306	121	367	160	989	251	622	51	250	46	30	1540
29	203	190	329	220	---	247	739	54	145	26	21	681
30	181	230	245	180	---	287	739	75	100	19	16	400
31	623	---	327	140	---	395	---	75	---	15	13	---
TOTAL	5273	3682	12251	13611	10275	29433	59029	5259	4477	1068.3	1769	9593
MEAN	170	123	395	439	367	949	1968	170	149	34.5	57.1	320
MAX	1790	541	1400	915	1360	7480	18600	576	1600	135	213	1590
MIN	21	46	140	140	100	247	151	47	24	4.7	12	28
CFSM	.63	.45	1.45	1.61	1.35	3.49	7.24	.63	.55	.13	.21	1.18
IN.	.72	.50	1.68	1.86	1.41	4.03	8.07	.72	.61	.15	.24	1.31

CAL YR 1976 TOTAL 148530.5 MEAN 406 MAX 7620 MIN 3.7 CFSM 1.49 IN 20.31
WTR YR 1977 TOTAL 155720.3 MEAN 427 MAX 18600 MIN 4.7 CFSM 1.57 IN 21.30

NOTE.--No gage-height record May 31 to July 1.

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at Burnt Mill Bridge, 300 ft (90 m) upstream from discharge station.

PERIOD OF RECORD.--Water years 1964-65, March 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)
OCT												
07...	1245	24	90	7.2	17.0	5	8.0	65	43	21	3.0	26
07...	1350	22	95	--	18.5	--	--	--	--	--	--	--
NOV												
02...	1315	325	60	5.8	8.0	5	9.9	19	7	5.1	1.5	15
30...	1350	233	69	--	1.5	--	--	--	--	--	--	--
DEC												
02...	1230	187	45	6.6	1.0	4	--	6	0	.4	1.3	19
FEB												
07...	1230	146	60	--	1.0	--	--	--	--	--	--	--
MAR												
10...	1300	450	50	--	7.0	--	--	--	--	--	--	--
APR												
04...	1700	25100	40	--	14.5	60	--	21	15	5.7	1.6	7
05...	1700	8213	--	--	9.5	--	--	--	--	--	--	--
06...	0900	3200	35	5.2	8.5	25	--	16	8	3.6	1.8	10
MAY												
31...	1430	66	65	--	24.0	--	--	--	--	--	--	--
AUG												
19...	0930	115	80	--	23.0	--	--	--	--	--	--	--

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT											
07...	0	21	2.6	17	2.2	56	.08	3.63	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	0	12	38	10	3.1	20	.03	17.6	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
02...	0	16	7.6	10	3.0	32	.04	16.2	--	--	--
FEB											
07...	--	--	--	--	--	--	--	--	--	--	--
MAR											
10...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	0	6	--	6.5	4.0	18	.02	1220	2	0	10
05...	--	--	--	--	--	--	--	--	--	--	--
06...	0	8	101	8.8	2.2	33	.04	285	1	0	20
MAY											
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
19...	--	--	--	--	--	--	--	--	--	--	--

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT											
07...	--	230	60	--	20	--	4	--	5	.32	100
07...	--	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	240	60	--	20	--	0	--	4	3.5	100
30...	--	--	--	--	--	--	--	--	--	--	--
DEC											
02...	--	150	60	--	20	--	0	--	--	--	--
FEB											
07...	--	--	--	--	--	--	--	--	--	--	--
MAR											
10...	--	--	--	--	--	--	--	--	--	--	--
APR											
04...	9	4900	170	13	220	.0	20	0	164	11100	86
05...	--	--	--	--	--	--	--	--	87	1930	88
06...	3	1000	30	11	90	.0	5	0	33	285	98
MAY											
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
19...	--	--	--	--	--	--	--	--	--	--	--

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN

LOCATION.--Lat 36°24'58", long 85°01'35", Fentress County, Hydrologic Unit 05130105, on right bank 200 ft (61 m) upstream from bridge on State Highway 52, 0.5 mi (0.8 km) upstream from Poplar Cove Creek, 5.3 mi (8.5 km) west of Jamestown, and at mile 12.7 (20.4 km).

DRAINAGE AREA.--202 mi^2 (523 km^2), includes 6 mi^2 (16 km^2) without surface drainage.

PERIOD OF RECORD.--October 1942 to current year. Prior to February 1943 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1944, 1946(M). WSP 1506: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 680.30 ft (207.355 m) above mean sea level, Sandy Hook datum. Feb. 24 to Apr. 7, 1943, nonrecording gage 200 ft (61 m) upstream at same datum.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years, 417 ft^3/s (11.81 m^3/s), 28.03 in/yr (712 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft^3/s (1,270 m^3/s) May 27, 1973, gage height, 30.46 ft (9.284 m) from rating curve extended above 32,000 ft^3/s (906 m^3/s) on basis of slope-area measurement of peak flow; minimum, 3.6 ft^3/s (0.10 m^3/s) Sept. 26-28, 1948; minimum gage height, 0.55 ft (0.168 m) Sept. 12-17, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 30.7 ft (9.36 m) from flood profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,700 ft^3/s (700 m^3/s), at 1515 hours Apr. 4, gage height, 23.06 ft (7.029 m), no other peak above base of 8,000 ft^3/s (226 m^3/s); minimum, 14 ft^3/s (0.40 m^3/s) Aug. 30, 31, Sept. 1, 2, gage height, 0.96 ft (0.293 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	557	121	201	122	800	252	276	63	126	40	14
2	36	384	121	186	113	599	240	256	48	158	31	20
3	25	282	126	206	114	492	697	242	40	134	36	21
4	20	218	124	212	124	1500	18000	286	34	92	29	19
5	18	177	119	226	158	1700	6470	250	30	68	25	16
6	17	145	124	301	145	1070	2230	209	27	54	22	86
7	22	124	774	342	127	757	1380	197	25	45	20	151
8	34	109	993	327	111	564	976	240	23	39	19	102
9	77	96	580	322	112	454	731	246	22	33	45	60
10	84	88	429	565	118	391	584	192	20	29	54	39
11	65	83	356	569	129	340	490	159	19	32	26	29
12	45	79	377	464	202	2210	417	133	18	34	20	23
13	35	74	489	399	461	4840	366	114	50	29	18	20
14	29	70	441	517	481	1790	332	98	206	28	18	21
15	25	70	395	1160	437	1100	301	85	102	25	20	44
16	23	71	363	900	374	769	268	76	62	23	42	891
17	21	70	310	575	306	572	243	67	141	20	55	557
18	20	65	265	500	299	490	221	59	76	20	76	236
19	19	61	230	403	275	427	208	53	138	23	43	377
20	25	59	221	340	251	415	199	48	276	23	29	282
21	38	57	233	288	225	423	183	57	354	19	22	169
22	47	54	201	251	210	402	173	83	257	19	18	107
23	40	51	197	214	211	384	626	85	355	20	17	77
24	36	47	176	219	759	348	1740	149	376	29	18	59
25	1680	46	173	214	920	316	1210	128	727	50	25	51
26	1750	47	221	198	666	286	811	93	1210	98	20	907
27	571	70	251	200	965	259	579	72	580	51	17	1320
28	338	102	241	206	1130	243	443	60	352	34	15	1060
29	218	134	230	150	---	244	388	63	218	28	15	506
30	227	145	195	150	---	256	325	79	153	25	14	321
31	698	---	223	143	---	285	---	86	---	23	14	---
TOTAL	6329	3635	9299	10948	9545	24726	41083	4241	6002	1431	863	7585
MEAN	204	121	300	353	341	798	1369	137	200	46.2	27.8	253
MAX	1750	557	993	1160	1130	4840	18000	286	1210	158	76	1320
MIN	17	46	119	143	111	243	173	48	18	19	14	14
CFSM	1.01	.60	1.49	1.75	1.69	3.95	6.78	.68	.99	.23	.14	1.25
IN.	1.17	.67	1.71	2.02	1.76	4.55	7.57	.78	1.11	.26	.16	1.40

CAL YR 1976 TOTAL 132322 MEAN 362 MAX 5730 MIN 13 CFSM 1.79 IN 24.37
WTR YR 1977 TOTAL 125687 MEAN 344 MAX 18000 MIN 14 CFSM 1.70 IN 23.15

03416000 WOLF RIVER NEAR BYRDSTOWN, TN

LOCATION.--Lat 36°33'37", long 85°04'23", Pickett County, Hydrologic Unit 05130105; on right bank 0.3 mi (0.5 km) upstream from bridge on county road, 0.5 mi (0.8 km) upstream from Widow Creek, 3.2 mi (5.I km) east of Byrdstown, 5.4 mi (8.7 km) upstream from Lick Creek, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--106 mi^2 (275 km^2).

PERIOD OF RECORD.--October 1942 to current year. Prior to June 1943 monthly discharge only, published in WSP 1306.

REVISED RECORD.--WSP 1276: 1943. WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 707.54 ft (215.658 m) above mean sea level, Sandy Hook datum.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years, 189 ft^3/s (5.352 m^3/s), 24.21 in/yr (615 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft^3/s (640 m^3/s) Jan. 29, 1957, gage height, 10.84 ft (3.304 m); from rating curve extended above 7,300 ft^3/s (207 m^3/s) on basis of velocity-area study; minimum, 2.0 ft^3/s (0.057 m^3/s) Sept. 17, 1954, gage height, 0.50 ft (0.152 m), result of construction at mill dam upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage about equal to that of Jan. 29, 1957, from information by local resident. Flood of June 30, 1928, reached a stage 1.5 ft (0.46 m) higher than that in March 1929 at a point 12.5 mi (20.1 km) upstream, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft^3/s (102 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	1845	3670	104	5.88	1.792	Apr. 4	1815	*18100	513	10.08	3.072

Minimum discharge, 16 ft^3/s (0.45 m^3/s) July 24, gage height, 1.21 ft (0.369 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	262	60	75	65	192	138	209	31	63	43	17
2	29	176	61	71	61	166	141	170	29	64	41	19
3	24	143	61	75	60	156	472	144	28	46	37	18
4	21	122	59	77	65	555	12600	130	26	38	34	28
5	20	105	56	91	77	550	3180	115	24	34	34	21
6	21	90	61	122	70	364	892	96	23	31	31	19
7	26	78	402	124	59	270	534	126	22	29	29	19
8	33	68	366	118	56	215	388	143	21	28	29	24
9	85	60	222	122	55	181	298	114	22	38	32	25
10	92	56	171	181	56	157	244	91	21	27	116	22
11	58	52	147	164	60	137	205	83	21	26	79	20
12	39	49	157	150	105	574	176	73	20	26	50	18
13	32	43	169	137	197	1530	154	64	20	25	37	17
14	28	41	157	335	173	543	139	57	24	23	180	18
15	26	41	150	600	159	361	125	52	26	22	124	24
16	24	39	139	386	143	272	112	46	23	21	60	491
17	23	37	128	259	126	219	100	41	27	20	49	418
18	21	36	116	219	122	200	86	37	24	21	86	168
19	21	35	107	173	118	169	85	35	69	26	58	162
20	25	34	105	152	112	153	79	39	75	19	40	206
21	31	34	98	137	105	136	72	58	47	18	33	119
22	34	31	86	122	100	133	70	50	35	17	29	79
23	29	31	85	110	101	121	154	120	41	17	25	61
24	28	29	78	110	216	113	406	98	176	17	24	48
25	1400	29	77	105	225	105	304	74	508	216	23	49
26	718	29	105	100	189	99	223	56	417	275	23	67
27	243	43	109	100	211	83	173	45	208	86	21	136
28	152	58	110	103	216	90	143	38	128	52	19	182
29	120	74	105	86	---	87	318	40	85	41	18	119
30	192	68	93	78	---	114	290	38	64	38	18	85
31	477	---	96	70	---	159	---	34	---	36	17	---
TOTAL	4112	1993	3936	4752	3302	8204	22301	2516	2285	1440	1439	2699
MEAN	133	66.4	127	153	118	265	743	81.2	76.2	46.5	46.4	90.0
MAX	1400	262	402	600	225	1530	12600	209	508	275	180	491
MIN	20	29	56	70	55	83	70	34	20	17	17	17
CFSM	1.26	.63	1.20	1.44	1.11	2.50	7.01	.77	.72	.44	.44	.85
IN.	1.44	.70	1.38	1.67	1.16	2.88	7.83	.88	.80	.51	.51	.95

CAL YR 1976 TOTAL 65156 MEAN 178 MAX 3410 MIN 11 CFSM 1.68 IN 22.87
WTR YR 1977 TOTAL 58979 MEAN 162 MAX 12600 MIN 17 CFSM 1.53 IN 20.70

03417500 CUMBERLAND RIVER AT CELINA, TN

LOCATION.--Lat 36°33'15", long 85°30'52", Clay County, Hydrologic Unit 05130106, on right bank at State Highway 52 bridge, 0.5 mi (0.8 km) northwest of courthouse in Celina, 600 ft (183 m) downstream from Obey River, and at mile 380.9 (612.7 km).

DRAINAGE AREA.--7,307 mi^2 (18,925 km^2).

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected at same site 1903-54 are in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-38. WSP 1276: 1924. WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 489.00 ft (149.047 m) above mean sea level. Prior to Nov. 20, 1930, nonrecording gage at site 400 ft (122 m) downstream at same datum. Since Feb. 2, 1973, auxiliary water-stage recorder 15.8 mi (25.4 km) downstream from base gage at same datum.

REMARKS.--Records good except those for days when discharge is below about 3,000 ft^3/s (85.0 m^3/s), which are fair due to indefinite stage-fall-discharge relation. Flow regulated by Lake Cumberland and Dale Hollow Lake (see page 144).

AVERAGE DISCHARGE.--55 years, 11,650 ft^3/s (329.9 m^3/s), 21.65 in/yr (550 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft^3/s (4,110 m^3/s) Dec. 29, 1926, maximum gage height, 57.25 ft (17.450 m), Dec. 29, 1926, from graph based on gage readings; minimum daily, 69 ft^3/s (1.95 m^3/s) Sept. 2, 11-14, 1925; minimum gage height observed, 0.20 ft (0.061 m) Sept. 2, 11-14, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 59.2 ft (18.04 m) in March 1826, from Cumberland River profile.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39,700 ft^3/s (1,120 m^3/s) Apr. 5, gage height, 25.18 ft (7.675 m); minimum daily, 367 ft^3/s (10.4 m^3/s) Aug. 7; minimum recorded gage height, 10.00 ft (3.048 m) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4630	6950	11300	8500	2400	2100	3640	25800	7800	13500	3080	9860
2	4650	8060	4580	12200	4000	1200	6870	24800	9000	9160	3470	9910
3	3560	7330	2800	17000	8200	1700	8660	24600	5400	4410	1340	6650
4	4870	4580	1500	8000	4050	7400	22600	21500	2600	2730	2740	3510
5	6010	4900	1500	9500	4100	8000	37300	21900	4500	7810	2290	1010
6	5490	5050	1500	14000	4050	4980	32700	23500	10600	14700	551	3870
7	6040	4570	3000	10500	4800	7070	30700	23300	8000	17200	367	7210
8	6310	3010	4790	5800	8300	7790	28400	23300	7600	13500	2810	11400
9	6270	8450	10200	3400	8200	7810	27700	18200	3800	11900	2830	12400
10	5580	7690	11600	15200	2100	6460	27400	12200	4500	8740	3460	8400
11	5780	5100	8460	10900	2300	12000	27200	13500	2200	5640	3240	1190
12	8330	8520	6180	20000	2700	22400	28200	15100	3200	11300	3080	2590
13	7980	9960	7830	14500	7500	29200	29500	16900	8600	13800	3200	5280
14	5090	11100	12100	13300	4700	17200	30300	16100	4800	15000	6380	7170
15	4280	9480	11000	5100	7200	12400	30700	12800	6800	15100	8170	6790
16	2790	9210	5980	9100	7600	10600	30100	11100	6100	13900	11400	6710
17	3260	11300	6430	18200	8000	10600	29400	14900	5060	9670	12600	9900
18	5900	10800	5770	21200	8200	13300	30900	18000	4400	5320	13000	8260
19	7610	7810	1590	19900	3500	15500	31100	17000	4000	9810	10700	6270
20	5570	2510	1200	18700	3700	17600	27500	16400	4000	11400	1500	7620
21	3250	1210	11900	8100	3700	13200	27800	15400	6900	11600	435	9010
22	1440	2780	13000	10000	4600	15400	26100	10600	5900	10200	2850	9830
23	2090	10100	8300	10300	5200	17100	25900	5620	6600	5480	8360	10400
24	1820	10100	3100	12300	10800	18400	23800	7190	13000	3490	9280	11200
25	2490	5630	2100	3100	4400	14300	21900	8660	6200	4280	10500	9700
26	2640	2640	2100	10400	4800	11900	24300	8010	5100	6420	11900	10500
27	3230	2400	1050	10300	5200	8090	22700	6480	2300	3520	11900	10500
28	3880	3220	3700	3200	5600	6790	26000	7230	11300	2000	6250	12000
29	5280	4460	1250	13700	---	6710	26500	1380	10900	2000	6170	12100
30	5180	10900	500	15300	---	6270	30000	3200	18000	2000	9410	3920
31	8330	---	6800	10400	---	5060	---	3200	---	4950	9130	---
TOTAL	149630	199820	173110	362100	149900	338530	775870	447870	199160	270530	182393	235160
MEAN	4827	6661	5584	11680	5354	10920	25860	14450	6639	8727	5884	7839
MAX	8330	11300	13000	21200	10800	29200	37300	25800	18000	17200	13000	12400
MIN	1440	1210	500	3100	2100	1200	3640	1380	2200	2000	367	1010

CAL YR 1976 TOTAL 4024221 MEAN 11000 MAX 45400 MIN 278 MEAN‡ 10393 CFSM‡ 1.42 IN.‡ 19.36
WTR YR 1977 TOTAL 3484073 MEAN 9545 MAX 37300 MIN 367 MEAN‡ 9707 CFSM‡ 1.33 IN.‡ 18.03

‡ Adjusted for change in contents in Lake Cumberland and Dale Hollow Lake.

03418070 ROARING RIVER ABOVE GAINESBORO, TN

LOCATION.--Lat 36°21'04", long 85°32'45", Jackson County, Hydrologic Unit 05130106, near left bank of downstream end of county road bridge, 1.1 mi (1.8 km) upstream from Blackburn Fork, 6.3 mi (10.1 km) east of Gainesboro, and at mile 9.1 (14.6 km).

DRAINAGE AREA.--210 mi^2 (544 km^2), includes 34 mi^2 (88 km^2) without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 520.31 ft (158.590 m) above mean sea level.

REMARKS.--Records fair except those below 5.0 ft^3/s (0.14 m^3/s), which are poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft^3/s (634 m^3/s) Mar. 12, 1975, gage height, 21.83 ft (6.654 m) from high-water marks; no flow for long periods.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft^3/s (329 m^3/s) at 1330 Apr. 4, gage height, 16.22 ft (4.944 m), no other peaks above base of 5,000 ft^3/s (142 m^3/s); minimum, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	167	.00	5.6	39	280	44	81	5.5	1.6	84	.03
2	.00	86	.00	8.0	40	219	70	57	1.5	4.5	43	.00
3	.00	37	.00	16	29	191	494	56	.00	.77	15	.00
4	.00	34	.00	16	30	1280	9870	51	.00	.00	4.5	.00
5	.00	8.0	.00	24	33	1030	6700	42	.00	.00	.00	.00
6	.00	3.7	.00	104	25	561	2090	32	.00	.00	.00	.00
7	.00	.02	224	134	24	394	1220	56	.00	.00	.00	110
8	.00	.00	336	118	25	296	898	92	.00	.00	.00	36
9	.00	.00	167	114	30	233	625	70	.00	.00	.00	22
10	.01	.00	102	277	19	193	477	32	.00	.00	.00	15
11	.00	.00	68	305	17	159	375	22	.00	.00	.00	9.7
12	.00	.00	90	224	45	1270	313	17	.00	.00	.00	1.5
13	.00	.00	157	177	116	2360	239	14	.00	.00	.00	.00
14	.00	.00	123	293	90	901	190	11	.00	.00	223	7.6
15	.00	.00	95	628	54	543	155	9.4	.00	.00	266	128
16	.00	.00	74	420	43	391	122	7.6	.00	.00	151	1150
17	.00	.00	47	291	34	302	96	5.5	.00	.00	484	967
18	.00	.00	29	249	34	261	81	3.7	.00	.00	607	378
19	.00	.00	15	185	34	213	67	2.4	.00	.00	269	208
20	.00	.00	12	155	32	181	55	.55	73	.00	133	142
21	.00	.00	26	159	29	161	45	.10	15	.00	77	91
22	.00	.00	17	109	28	149	43	.00	3.7	.00	43	58
23	.00	.00	20	88	30	121	310	19	2.3	.00	93	41
24	.00	.00	15	76	477	100	906	83	11	.00	201	33
25	165	.00	16	88	460	76	607	19	57	416	116	194
26	1020	.00	23	72	310	59	385	9.1	181	167	44	539
27	213	.00	24	90	372	45	255	4.3	74	46	26	922
28	79	.00	19	111	394	40	173	2.6	22	17	19	838
29	23	.00	17	81	---	40	132	5.8	8.8	8.5	15	405
30	74	.00	7.7	84	---	81	107	35	2.3	1.7	12	247
31	259	---	17	63	---	76	---	17	---	.00	6.3	---
TOTAL	1833.01	335.72	1740.70	4764.6	2893	12206	27144	857.05	457.10	663.07	2931.80	6542.83
MEAN	59.1	11.2	56.2	154	103	394	905	27.6	15.2	21.4	94.6	218
MAX	1020	167	336	628	477	2360	9870	92	181	416	607	1150
MIN	.00	.00	.00	5.6	17	40	43	.00	.00	.00	.00	.00
CFSM	.28	.05	.27	.73	.49	1.88	4.31	.13	.07	.10	.45	1.04
IN.	.32	.06	.31	.84	.51	2.16	4.81	.15	.08	.12	.52	1.16

CAL YR 1976 TOTAL 65682.82 MEAN 179 MAX 5080 MIN .00 CFSM .85 IN 11.64
WTR YR 1977 TOTAL 62368.88 MEAN 171 MAX 9870 MIN .00 CFSM .81 IN 11.05

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN

LOCATION.--Lat 35°42'32", long 85°43'46", Warren County, Hydrologic Unit 05130107, on left bank at downstream side of bridge on U. S. Highway 70S, 1.8 mi (2.9 km) downstream from Barren Fork River, 2.5 mi (4.0 km) northeast of McMinnville, and at mile 19.5 (31.4 km).

DRAINAGE AREA.--640 mi^2 (1,658 km^2).

PERIOD OF RECORD.--October 1924 to current year. Prior to April 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 825.78 ft (251.698 m) above mean sea level, Sandy Hook datum. Prior to Oct. 16, 1926, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good. Periodic observation of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--53 years, 1,168 ft^3/s (33.08 m^3/s), 24.78 in/yr (629 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,300 ft^3/s (2,130 m^3/s) Mar. 23, 1929, gage height, 39.1 ft (11.92 m) from rating curve extended above 42,000 ft^3/s (1,190 m^3/s) on basis of slope-area measurement of peak flow; minimum, 35 ft^3/s (0.991 m^3/s) Sept. 21, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1854 is believed to have been about equal to that of Mar. 23, 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft^3/s (311 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0930	15300	433	17.49	5.331	Apr. 5	0700	*45800	1300	32.01	9.757

Minimum discharge, 120 ft^3/s (3.40 m^3/s) Oct. 19, 20, gage height, 1.35 ft (0.411 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	279	813	1020	1010	721	2530	1460	917	457	427	183	170
2	211	732	807	898	646	1900	1240	850	388	529	169	170
3	174	645	712	837	603	1550	1940	1550	339	577	160	151
4	152	566	630	802	584	5660	19400	2270	304	430	153	141
5	134	491	569	940	573	6940	38500	1660	279	333	148	138
6	145	434	537	1480	547	4040	16700	1260	261	279	141	135
7	189	386	719	2130	495	3100	6170	1350	243	244	140	180
8	216	349	1250	2080	449	2410	3460	1580	226	222	137	323
9	266	320	1150	1900	423	1930	2500	1360	216	340	210	333
10	296	303	942	3620	412	1610	1960	1080	206	226	265	279
11	276	290	836	3020	403	1390	1630	872	198	203	613	215
12	219	286	1010	2160	424	3000	1390	739	195	202	210	181
13	189	269	1520	1630	542	12900	1230	648	196	193	194	165
14	164	266	1370	1520	679	7220	1100	577	215	177	846	174
15	150	263	1200	2290	666	3720	998	515	202	171	654	524
16	141	256	1110	2140	633	2600	903	464	198	162	1010	1190
17	136	247	982	1640	592	1960	823	418	221	155	745	2150
18	127	254	853	1360	554	1650	755	399	236	152	907	1420
19	123	226	754	1140	542	1420	718	416	274	145	635	867
20	145	219	709	978	519	1380	663	437	574	141	446	1110
21	148	212	787	866	487	1420	618	417	1300	139	353	884
22	145	203	810	773	456	1270	596	1430	1130	169	292	670
23	136	194	773	709	440	1150	828	1600	739	231	251	535
24	155	188	713	746	2950	1030	2530	957	560	172	229	430
25	1580	183	666	943	4280	941	2380	850	490	323	211	670
26	4820	190	872	825	2830	865	1680	766	889	407	197	1730
27	1990	227	1160	910	3040	800	1280	669	1330	271	184	1220
28	1180	320	1060	1080	3390	760	1040	634	915	210	175	1730
29	874	1090	941	1070	---	787	883	604	635	195	167	1410
30	746	1440	805	896	---	919	792	580	498	302	159	1050
31	910	---	831	811	---	1450	---	535	---	206	147	---
TOTAL	16416	11862	28098	43204	28880	80302	116167	28404	13914	7933	10331	20345
MEAN	530	395	906	1394	1031	2590	3872	916	464	256	333	678
MAX	4820	1440	1520	3620	4280	12900	38500	2270	1330	577	1010	2150
MIN	123	183	537	709	403	760	596	399	195	139	137	135
CFSM	.83	.62	1.42	2.18	1.61	4.05	6.05	1.43	.73	.40	.52	1.06
IN.	.95	.69	1.63	2.51	1.68	4.67	6.75	1.65	.81	.46	.60	1.18

CAL YR 1976 TOTAL 346895 MEAN 948 MAX 8700 MIN 99 CFSM 1.48 IN 20.16
WTR YR 1977 TOTAL 405856 MEAN 1112 MAX 38500 MIN 123 CFSM 1.74 IN 23.59

03422500 CANEY FORK NEAR ROCK ISLAND, TN

LOCATION.--Lat 35°48'26", long 85°37'44", White County, Hydrologic Unit 05130108, on right bank 180 ft (50 m) downstream from powerhouse of Tennessee Valley Authority, 0.8 mi (1.3 km) downstream from Great Falls Dam, 0.9 mi (1.4 km) downstream from Collins River, 1.5 mi (2.4 km) northwest of Rock Island, and at mile 90.3 (145.3 km).

DRAINAGE AREA.--1,678 mi^2 (4,346 km^2).

PERIOD OF RECORD.--November 1911 to April 1913, July 1913 to May 1914, August 1914 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1934, 1937. WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 647.09 ft (197.233 m) above mean sea level. Prior to Mar. 30, 1924, at sites from 80 ft (24 m) to 0.5 mi (0.8 km) upstream at different datums. Apr. 12, 1925, to Sept. 9, 1930, at present site at datum 5.00 ft (1.524 m) higher and Sept. 10, 1930, to Sept. 18, 1964, 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Flow regulated since Dec. 8, 1916, by Great Falls Lake (station 03422000).

AVERAGE DISCHARGE.--63 years (1915-77), 3,204 ft^3/s (90.74 m^3/s), 25.93 in/yr (659 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft^3/s (5,950 m^3/s) Mar. 23, 1929, gage height, 43.6 ft (13.29 m), present datum, from floodmark, from rating curve extended above 110,000 ft^3/s (3,120 m^3/s); minimum daily, 25 ft^3/s (0.71 m^3/s) several days in August to October 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1902 reached a stage about 10 ft (3.0 m) lower than the flood of Mar. 23, 1929, at a point 8 mi (13 km) downstream, from profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 129,900 ft^3/s (3,680 m^3/s) Apr. 4, gage height, 32.90 ft (10.028 m); minimum, 34 ft^3/s (0.96 m^3/s) Oct. 10, gage height, 2.06 ft (0.628 m); minimum daily, 34 ft^3/s (0.96 m^3/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	728	3110	2210	2850	1880	5140	3040	3140	1420	570	430	852
2	753	3090	2030	2520	1940	4080	3040	3110	1260	46	380	846
3	737	3060	2070	2800	1840	3550	3110	3100	1070	46	420	860
4	693	3030	1500	1600	1730	10700	61700	3110	782	47	486	939
5	939	2700	817	1700	1130	14200	84400	3100	42	406	374	55
6	1370	2310	1750	2370	44	8140	32000	3100	835	879	312	55
7	432	1550	2550	2790	1440	6460	13000	3100	621	396	57	1560
8	143	1410	2750	2980	1750	5190	8000	3130	559	413	321	996
9	35	1290	2840	3010	1280	4270	5800	3170	430	50	162	1350
10	34	1110	2820	3100	1260	3660	4400	3180	526	50	319	1780
11	1030	997	2680	4350	1300	3190	4100	3180	42	153	1090	1360
12	1070	1030	2910	5260	1010	8060	3700	3160	42	184	1180	113
13	1350	1020	2930	3800	43	30600	3160	3110	493	430	568	48
14	1340	831	2940	3550	1010	15900	3170	3080	620	155	657	43
15	1390	957	2940	6030	2060	8260	3150	3040	836	746	1180	44
16	65	541	2950	5470	2560	5540	3130	2990	470	51	1330	44
17	307	573	2960	3890	2520	4650	3120	2620	390	50	1330	290
18	905	571	2950	3550	674	3690	3100	2370	43	50	1790	1090
19	879	584	2930	3280	44	3380	3080	2220	43	51	1800	1780
20	875	44	2920	3170	44	3260	3040	2250	189	50	1790	1800
21	916	44	2900	3160	1810	3280	3010	1570	1180	60	1570	1810
22	890	545	2130	3160	1780	3200	2940	481	1600	63	1550	1800
23	46	715	2140	3140	2530	3150	3010	2020	1150	57	906	1800
24	47	573	1820	3120	2570	3140	3090	2870	1130	57	642	1800
25	2150	566	507	3100	3070	3090	3170	2830	825	57	627	1400
26	3070	1180	553	3090	3150	3060	3780	2800	885	58	694	1820
27	3150	419	1360	3070	4700	3040	3510	2010	1600	426	683	2830
28	3120	44	2290	3060	7710	3000	3240	1430	2030	408	58	3150
29	3110	620	2870	3040	---	2990	3180	50	786	51	59	3150
30	3130	1700	2870	3010	---	2960	3170	1180	534	55	318	3240
31	3100	---	2860	2980	---	3000	---	1620	---	53	419	---
TOTAL	37804	36214	72747	102000	52879	185830	283340	78121	22433	6168	23502	38705
MEAN	1219	1207	2347	3290	1889	5995	9445	2520	748	199	758	1290
MAX	3150	3110	2960	6030	7710	30600	84400	3180	2030	879	1800	3240
MIN	34	44	507	1600	43	2960	2940	50	42	46	57	43
(†)	+1100	-7800	-2200	+500	+14100	-6900	+4400	-12600	+1100	+9300	-600	+4200
MEAN‡	1255	947	2276	3306	2392	5772	9591	2114	784	499	739	1430
CFSM‡	.75	.56	1.36	1.97	1.43	3.44	5.72	1.26	.47	.30	.44	.85
IN.‡	.86	.63	1.56	2.27	1.48	3.97	6.38	1.45	.52	.34	.51	.95

CAL YR 1976 TOTAL 906979 MEAN 2478 MAX 30000 MIN 34 MEAN‡ 2437 CFSM‡ 1.45 IN.‡ 19.77
WTR YR 1977 TOTAL 939743 MEAN 2575 MAX 84400 MIN 34 MEAN‡ 2587 CFSM‡ 1.54 IN.‡ 20.93

† Change in contents, in cfs-days, in Great Falls Lake.
‡ Adjusted for change in contents.

03425000 CUMBERLAND RIVER AT CARTHAGE, TN
(National stream-quality accounting network station)

LOCATION.--Lat 36°14'53", long 85°57'19", Smith County, Hydrologic Unit 05130201, on left bank of Cordell Hull Bridge on State Highway 25, at Carthage, 1.0 mi (1.6 km) downstream from Caney Fork River, and at mile (495.9 km).

DRAINAGE AREA.--10,690 mi^2 (27, 687 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected in this vicinity since 1885 are in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-39. WSP 1276: 1927, 1929(M), 1937(M). WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 437.53 ft (133.359 m) above mean sea level. Prior to May 12, 1936, nonrecording gage at site 1,000 ft (305 m) downstream at same datum. May 12 to July 17, 1936, nonrecording gage at present site and datum. Since Oct. 1, 1957, auxiliary water-stage recorder 15.8 mi (25.4 km) downstream from base gage at same datum.

REMARKS.--Records good. Flow regulated by five upstream lakes or reservoirs, (see p.144).

AVERAGE DISCHARGE.--55 years, 17,480 ft^3/s (495.0 m^3/s), 22.20 in/yr (564 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft^3/s (5,950 m^3/s) Dec. 30, 1926; maximum gage height, 59.8 ft (18.23 m) Dec. 30, 1926; minimum daily discharge, 366 ft^3/s (10.4 m^3/s) Oct. 29, 1940; minimum gage height since filling of Old Hickory Lake on Dec. 30, 1956, 4.3 ft (1.31 m) Oct. 28, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, that of Dec. 30, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 89,900 ft^3/s (2,550 m^3/s) Apr. 5; maximum gage height, 33.32 ft (10.156 m) Apr. 5; minimum daily, 800 ft^3/s (22.7 m^3/s), Dec. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5510	13400	15700	13700	6710	2900	10900	30100	11400	12800	5110	11700
2	3520	13300	8900	13400	9460	1800	9280	29500	10700	9000	6960	10600
3	3240	12000	5100	19000	9660	2500	11200	29800	7130	3400	4280	8640
4	4300	12000	2100	12500	5850	17000	57900	25200	3670	3300	4770	6520
5	7600	7850	1400	15100	5690	19000	78500	22600	5570	14700	3910	4310
6	7600	9060	3400	20400	6100	11000	64000	26500	7730	15200	3830	6730
7	9400	5960	5200	13900	8750	12000	67700	32400	9660	22000	3840	10600
8	8000	7900	13900	11800	13900	13000	63300	26000	10700	19500	3750	14400
9	6200	5860	10100	8170	9860	9000	64300	19500	5790	11300	4660	16500
10	5200	11000	20000	22500	4210	10000	59200	20000	6150	6230	5770	12300
11	7700	10100	13500	19400	3790	13000	57700	21300	3010	5860	5630	6200
12	11000	10200	9300	30000	5220	26000	50000	23000	4050	13000	7440	4620
13	11400	13500	14000	22000	8230	47000	52000	22600	10700	15000	5170	5760
14	7400	8060	20000	13800	7250	30000	48100	20000	6020	13200	4400	6360
15	6600	8310	18000	6520	11000	22000	45300	12500	6840	17200	13500	12500
16	5400	10000	11000	15000	11000	19000	45300	16600	4180	14200	17500	11600
17	4500	11000	5600	28000	11100	17000	42300	25800	3920	11900	15500	11900
18	7500	14400	7000	27300	9730	21500	39800	23100	4340	8200	15100	13900
19	7800	12600	800	28200	6110	22600	44800	21600	4510	11000	10500	8300
20	6000	5000	9600	23600	6340	21000	40700	16700	6300	10200	5850	10700
21	6300	3240	17000	11800	6380	19500	35900	15900	8330	10800	4110	11000
22	7500	8300	15000	14400	8050	16600	35500	13800	7260	10900	4410	8290
23	4000	13800	8140	10500	6880	22500	33900	6270	8440	6700	8880	6720
24	4400	14300	4860	14900	17800	23900	32400	9750	14400	5440	12300	6280
25	4200	6480	2950	10900	13700	23900	25200	11300	9070	7090	11200	6540
26	5500	5650	2850	17900	6720	17000	27700	9940	5700	10100	13800	10500
27	4000	2900	4000	13300	7850	11200	28100	8120	3870	10600	15200	14900
28	8800	3760	6190	10900	8470	11500	32600	10000	12100	4040	6800	14100
29	8100	5800	3200	22300	---	14800	33400	4430	12900	3440	9070	11900
30	10000	16500	2420	19200	---	12100	32100	4450	15000	3660	14500	10700
31	4100	---	13500	11800	---	7940	---	8120	---	5060	14600	---
TOTAL	202770	282230	274710	522190	235810	518240	1269080	566880	229440	315020	262340	295070
MEAN	6541	9408	8862	16840	8422	16720	42300	18290	7648	10160	8463	9836
MAX	11400	16500	20000	30000	17800	47000	78500	32400	15000	22000	17500	16500
MIN	3240	2900	800	6520	3790	1800	9280	4430	3010	3300	3750	4310

CAL YR 1976 TOTAL 5532570 MEAN 15120 MAX 66500 MIN 800 MEAN‡ 14426 CFSM‡ 1.34 IN.‡ 18.24
WTR YR 1977 TOTAL 4973780 MEAN 13630 MAX 78500 MIN 800 MEAN‡ 13891 CFSM‡ 1.30 IN.‡ 17.64

‡ Adjusted for change in contents in Lake Cumberland, Dale Hollow Lake, Cordell Hull Reservoir, Great Falls and Center Hill Lakes.

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCATNCE: October 1975 to current year.
WATER TEMPERATURE: October 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1975.

REMARKS.--Interruptions in the record were due to water levels falling below the instrument probes.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
NOV												
03...	1130	6330	160	7.9	12.5	3	--	86	81	80	16	24
DEC												
01...	1115	17300	165	7.1	7.0	4	--	<1	84	72	21	20
JAN												
17...	1200	27500	140	7.2	2.7	5	--	--	--	85	27	26
FEB												
17...	1230	9990	180	7.7	4.0	5	--	82	86	85	19	26
MAR												
30...	1100	12100	180	7.6	11.0	7	--	87	89	84	30	24
APR												
27...	1115	61300	160	7.0	14.0	15	--	240	125	71	27	20
MAY												
23...	1330	7200	175	7.2	18.5	8	--	116	320	68	22	20
JUN												
22...	1215	6180	170	7.5	20.5	4	--	818	--	66	18	19
JUL												
26...	1115	6900	180	7.1	19.5	8	7.9	--	--	55	8	15
SEP												
13...	1000	507	165	7.1	17.0	6	6.6	112	304	64	17	20

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV												
03...	4.8	2.8	7	.1	1.2	78	0	64	1.6	19	2.6	.1
DEC												
01...	5.4	3.4	9	.2	1.3	62	0	51	7.9	23	2.4	.1
JAN												
17...	4.8	2.7	6	.1	1.3	70	0	57	7.1	19	2.6	.2
FEB												
17...	4.9	2.7	6	.1	1.4	81	0	66	2.6	17	3.1	.1
MAR												
30...	5.9	4.9	11	.2	1.7	66	0	54	2.7	31	4.1	.0
APR												
27...	5.1	4.1	11	.2	1.5	54	0	44	8.6	24	3.3	.0
MAY												
23...	4.4	3.7	10	.2	1.5	56	0	46	5.7	25	3.4	.0
JUN												
22...	4.4	3.4	10	.2	1.4	58	0	48	2.9	21	3.4	.0
JUL												
26...	4.3	3.0	10	.2	1.6	58	0	48	7.4	17	3.0	.1
SEP												
13...	3.3	1.9	6	.1	1.2	57	0	47	7.2	12	2.5	.1

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)
NOV												
03...	3.5	83	96	.11	1420	.19	--	--	.18	--	.37	1.6
DEC												
01...	3.5	99	90	.13	4620	.19	--	--	.19	--	.38	1.7
JAN												
17...	4.2	100	95	.14	7430	.24	--	--	.12	--	.36	1.6
FEB												
17...	2.8	100	98	.14	2700	.25	--	--	.20	--	.45	2.0
MAR												
30...	3.9	113	108	.15	3690	.26	--	--	.21	--	.47	2.1
APR												
27...	4.3	104	89	.14	17200	.64	--	--	.36	--	1.0	4.4
MAY												
23...	3.9	98	89	.13	1910	.31	--	--	.22	--	.53	2.3
JUN												
22...	3.8	88	85	.12	1470	.29	--	--	.42	--	.71	3.1
JUL												
26...	3.6	77	76	.10	1440	.44	--	--	.39	--	.83	3.7
SEP												
13...	3.4	83	73	.11	114	.35	.02	.14	.16	--	.51	2.3

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	SUS-PENDED BARIUM (BA) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
NOV												
03...	.03	--	1	1	0	--	--	--	1	0	1	30
DEC												
01...	.01	--	--	--	--	--	--	--	--	--	--	--
JAN												
17...	.02	--	1	1	0	--	--	--	2	0	2	<10
FEB												
17...	.03	--	--	--	--	--	--	--	--	--	--	--
MAR												
30...	.03	--	--	--	--	--	--	--	--	--	--	--
APR												
27...	.04	--	1	1	0	--	--	--	5	0	5	10
MAY												
23...	.06	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	.05	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	.09	--	--	--	--	--	--	--	--	--	--	--
SEP												
13...	.03	--	0	0	0	0	0	0	27	13	10	<10

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)
NOV												
03...	30	0	0	0	0	2	2	0	270	0	4	0
DEC												
01...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
17...	<10	0	0	0	0	4	4	0	170	10	0	0
FEB												
17...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
30...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
27...	0	10	2	2	0	16	10	6	1100	20	12	2
MAY												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
13...	<10	0	0	0	0	3	0	3	440	0	10	0

DATE	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)
NOV								
03...	4	70	10	55	55	.3	0	0
DEC								
01...	--	--	--	--	--	--	--	--
JAN								
17...	0	40	10	.0	.0	.0	0	0
FEB								
17...	--	--	--	--	--	--	--	--
MAR								
30...	--	--	--	--	--	--	--	--
APR								
27...	10	60	20	.0	.0	.0	0	0
MAY								
23...	--	--	--	--	--	--	--	--
JUN								
22...	--	--	--	--	--	--	--	--
JUL								
26...	--	--	--	--	--	--	--	--
SEP								
13...	10	50	10	<.5	.0	<.5	0	0

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	SUS-PENDED SILVER (AG) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)
NOV									
03...	0	--	--	--	30	30	0	1.5	--
DEC									
01...	--	--	--	--	--	--	--	--	--
JAN									
17...	0	--	--	--	20	10	10	4.9	--
FEB									
17...	--	--	--	--	--	--	--	--	--
MAR									
30...	--	--	--	--	--	--	--	--	--
APR									
27...	0	--	--	--	50	30	20	5.7	4.7
MAY									
23...	--	--	--	--	--	--	--	--	--
JUN									
22...	--	--	--	--	--	--	--	--	--
JUL									
26...	--	--	--	--	--	--	--	--	--
SEP									
13...	0	0	0	0	30	20	10	--	5.9

DATE	SUS-PENDED ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
NOV								
03...	--	2400	--	--	--	7	120	100
DEC								
01...	--	6000	--	--	--	--	--	--
JAN								
17...	--	670	--	--	--	--	--	--
FEB								
17...	--	3000	--	--	--	34	917	55
MAR								
30...	--	--	--	--	--	4	131	100
APR								
27...	1.0	--	--	--	--	14	2320	92
MAY								
23...	--	880	--	--	--	38	739	99
JUN								
22...	--	1500	--	--	--	28	467	11
JUL								
26...	--	2500	--	--	--	36	671	10
SEP								
13...	--	--	--	--	--	--	--	--

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	175	148	164	194	146	160	171	130	163	175	152	162
2	177	162	166	188	156	168	169	161	164	176	156	167
3	174	157	164	181	142	162	---	---	---	198	154	174
4	169	157	164	175	149	162	---	---	---	189	153	167
5	167	152	164	170	152	159	---	---	---	184	152	162
6	174	154	163	167	148	158	---	---	---	192	158	174
7	166	153	163	190	158	174	257	130	191	243	162	188
8	167	154	164	207	158	176	309	172	204	267	168	186
9	169	155	163	179	149	162	191	157	167	216	169	184
10	176	161	166	184	150	173	192	157	166	212	179	190
11	175	150	162	177	147	165	193	155	172	205	166	178
12	162	146	154	178	143	163	201	155	176	184	164	170
13	163	143	155	178	144	162	261	162	184	196	165	175
14	163	149	159	183	147	165	199	160	180	247	178	192
15	---	---	---	175	142	163	199	156	181	307	256	277
16	---	---	---	171	145	159	211	189	200	277	180	232
17	---	---	---	169	151	161	242	129	181	179	168	174
18	---	---	---	170	144	157	194	177	187	185	168	174
19	---	---	---	168	146	160	203	187	195	193	166	174
20	---	---	---	167	160	165	299	152	215	196	163	180
21	---	---	---	204	152	167	174	152	160	189	160	170
22	160	138	146	173	151	165	178	156	168	188	161	174
23	163	135	150	163	146	154	187	165	175	203	169	185
24	164	139	149	160	147	155	217	141	183	204	161	182
25	227	138	175	163	153	158	180	124	168	184	159	168
26	232	196	212	176	157	162	189	134	179	184	163	174
27	219	164	188	180	121	163	---	---	---	205	181	190
28	176	153	165	187	150	165	308	154	184	259	160	184
29	179	150	161	189	151	162	214	122	186	177	164	185
30	168	143	160	161	151	156	248	152	175	185	167	178
31	169	152	160	---	---	---	190	152	171	251	179	186
MONTH	---	---	---	207	121	163	309	122	180	307	152	182

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	186	163	171	280	187	218	---	---	---	159	150	156
2	192	165	177	---	---	---	---	---	---	195	147	161
3	200	182	190	---	---	---	---	---	---	162	145	153
4	201	183	189	276	126	212	---	---	---	168	148	154
5	202	183	190	239	118	152	---	---	---	174	143	154
6	204	174	187	310	120	190	---	---	---	160	143	153
7	183	167	174	332	121	190	---	---	---	171	144	156
8	180	164	170	253	125	156	---	---	---	193	158	170
9	189	182	186	207	123	133	---	---	---	292	149	191
10	198	179	188	148	123	132	---	---	---	176	141	154
11	212	181	196	211	144	180	---	---	---	168	138	149
12	217	174	196	139	117	132	---	---	---	163	135	147
13	207	187	192	129	112	120	---	---	---	161	135	147
14	252	184	214	133	115	123	156	147	152	166	132	149
15	201	171	190	129	110	120	152	146	149	169	131	147
16	199	172	188	189	117	148	153	146	149	159	131	150
17	198	177	242	177	86	139	154	145	148	159	130	149
18	200	188	233	176	119	128	159	152	155	159	129	146
19	218	186	255	---	---	---	156	144	149	159	130	146
20	201	177	187	---	---	---	155	145	149	158	134	149
21	194	175	184	---	---	---	159	143	150	161	139	150
22	196	178	185	---	---	---	161	143	152	162	150	154
23	207	181	186	---	---	---	200	144	167	191	158	169
24	242	144	211	---	---	---	203	156	169	243	146	188
25	262	203	184	---	---	---	250	159	193	155	135	146
26	280	117	141	---	---	---	189	154	164	157	141	150
27	296	203	143	---	---	---	177	150	159	160	132	147
28	---	---	---	---	---	---	172	150	158	169	133	148
29	---	---	---	---	---	---	166	150	157	160	143	151
30	---	---	---	---	---	---	165	149	155	216	154	162
31	---	---	---	---	---	---	---	---	---	238	149	175
MONTH	296	117	191	---	---	---	---	---	---	292	129	156
		JUNE			JULY			AUGUST			SEPTEMBER	
1	150	124	137	151	124	140	---	---	---	192	139	164
2	155	131	142	153	139	147	150	97	139	189	142	167
3	170	137	149	---	---	---	---	---	---	191	145	173
4	163	136	151	---	---	---	---	---	---	191	153	179
5	162	137	147	---	---	---	---	---	---	199	181	193
6	160	134	146	143	94	109	---	---	---	198	175	189
7	149	122	133	134	114	125	---	---	---	191	149	173
8	148	130	140	133	115	123	---	---	---	193	145	172
9	146	127	139	132	95	128	---	---	---	192	149	184
10	151	106	137	165	114	133	154	134	149	195	157	178
11	150	133	141	134	100	118	157	119	153	195	161	183
12	148	122	132	---	---	---	164	143	157	196	182	193
13	154	115	144	---	---	---	168	119	160	205	164	190
14	150	114	145	---	---	---	171	137	155	199	139	183
15	148	140	147	---	---	---	219	131	167	198	179	192
16	170	113	147	---	---	---	172	130	151	252	176	199
17	164	125	139	---	---	---	173	136	154	266	161	190
18	154	137	145	---	---	---	201	129	166	195	164	189
19	155	145	149	---	---	---	188	166	172	230	190	199
20	161	144	148	---	---	---	202	176	185	231	150	183
21	168	123	140	---	---	---	---	---	---	210	158	183
22	157	130	147	---	---	---	---	---	---	214	177	191
23	149	125	137	---	---	---	---	---	---	---	---	---
24	162	145	150	---	---	---	188	142	173	---	---	---
25	179	116	137	---	---	---	187	146	167	---	---	---
26	154	140	147	---	---	---	179	138	164	276	191	217
27	167	145	152	---	---	---	181	140	168	229	192	198
28	241	144	167	---	---	---	182	147	166	226	180	198
29	154	123	142	---	---	---	187	154	178	284	150	184
30	151	128	142	---	---	---	189	137	166	252	146	190
31	---	---	---	---	---	---	192	141	168	---	---	---
MONTH	241	106	144	---	---	---	---	---	---	284	139	186

YEAR

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.5	14.5	18.0	23.0	13.5	15.5	8.5	7.0	8.0	7.5	4.5	6.5
2	20.0	15.5	18.0	14.0	12.5	13.0	8.0	6.5	7.0	6.5	3.5	5.0
3	20.0	16.0	18.0	14.5	13.0	14.0	---	---	---	7.5	3.0	5.0
4	20.5	16.0	19.0	15.5	13.0	14.0	---	---	---	8.0	3.5	6.5
5	20.0	16.0	18.5	14.5	13.0	14.0	---	---	---	8.0	4.5	7.0
6	20.5	16.5	19.0	14.5	13.0	13.5	---	---	---	7.5	6.0	6.5
7	19.0	15.5	18.0	14.0	12.0	13.0	9.5	7.0	8.5	7.0	3.5	5.5
8	19.0	16.0	18.0	12.5	12.0	12.5	9.0	7.5	8.0	7.0	5.5	6.5
9	18.5	14.0	17.0	13.5	12.0	13.0	9.0	8.0	8.5	7.0	5.5	6.5
10	18.5	14.0	16.5	14.0	11.0	12.5	9.0	7.5	8.5	6.5	4.5	6.0
11	18.0	12.0	16.5	13.5	11.5	12.5	9.5	7.0	8.5	6.0	5.0	6.0
12	18.0	12.0	16.0	13.0	11.0	12.0	10.0	6.5	8.0	6.5	4.5	5.5
13	18.0	15.5	17.0	13.0	10.5	11.5	9.5	7.5	8.5	6.5	4.5	5.5
14	18.0	15.5	17.0	12.5	10.0	11.5	9.0	6.0	7.5	6.5	3.5	5.0
15	---	---	---	13.0	7.5	11.5	9.0	6.5	8.0	6.0	5.5	5.5
16	---	---	---	13.0	10.5	11.5	7.5	5.5	7.0	6.0	2.5	5.0
17	---	---	---	12.0	10.0	11.0	9.0	6.5	8.5	5.5	3.5	5.0
18	---	---	---	13.0	9.5	11.5	---	---	---	5.5	4.0	5.0
19	---	---	---	13.0	9.5	11.0	7.0	6.5	7.0	5.5	4.0	5.0
20	---	---	---	11.0	9.5	10.0	8.5	6.5	7.5	5.5	4.0	4.5
21	---	---	---	11.0	9.0	10.0	8.5	7.5	8.0	6.0	4.5	5.0
22	15.0	14.0	14.5	10.5	9.0	9.5	---	---	---	5.5	3.5	4.5
23	15.0	14.0	14.5	11.5	9.0	10.5	7.5	6.0	6.5	4.5	3.5	4.0
24	15.0	13.5	14.5	11.5	9.5	10.5	7.0	5.0	6.0	5.5	2.5	4.0
25	15.0	14.5	15.0	11.0	9.0	10.0	7.5	5.0	6.0	5.5	5.0	5.5
26	14.5	13.5	14.0	11.0	9.0	10.0	6.0	5.0	5.5	6.0	4.0	5.0
27	14.0	13.0	13.5	11.5	9.5	10.5	---	---	---	6.0	3.0	4.5
28	13.5	13.0	13.5	12.0	10.5	11.0	8.5	5.0	7.0	6.0	4.5	5.0
29	13.5	13.0	13.5	10.0	7.5	9.0	6.5	4.5	5.5	5.0	4.0	4.5
30	15.5	12.0	13.5	11.0	9.0	9.5	7.5	4.5	6.5	4.5	2.5	3.5
31	22.5	13.0	18.5	---	---	---	7.5	4.5	6.0	4.5	2.0	3.0
MONTH	---	---	---	23.0	7.5	11.5	---	---	---	8.0	2.0	5.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.0	3.5	4.5	7.0	6.0	6.5	---	---	---	13.0	11.5	12.0
2	5.0	2.5	4.5	8.0	5.5	6.5	---	---	---	15.0	12.0	12.5
3	5.0	2.5	4.0	7.5	6.5	7.0	---	---	---	13.0	11.5	12.5
4	5.5	3.5	4.5	10.0	7.0	9.0	---	---	---	13.5	12.0	12.5
5	5.5	3.0	4.5	27.0	7.5	18.5	---	---	---	14.5	12.0	13.5
6	4.5	3.0	4.0	25.0	8.0	15.0	---	---	---	14.5	11.5	13.5
7	4.5	3.5	4.0	28.0	8.0	15.0	---	---	---	15.5	12.5	14.0
8	5.0	3.5	4.0	20.5	7.5	14.5	---	---	---	15.5	13.5	14.5
9	5.0	2.5	3.5	27.0	9.0	19.0	---	---	---	17.5	12.0	15.0
10	6.0	2.5	4.5	22.5	9.5	17.5	---	---	---	14.5	11.0	13.0
11	6.0	3.0	4.5	18.0	9.0	12.5	---	---	---	14.5	11.0	13.0
12	6.5	5.0	5.5	22.0	9.0	18.5	---	---	---	14.5	11.0	13.0
13	6.0	3.5	5.0	17.0	8.0	15.0	---	---	---	15.0	11.0	13.5
14	7.0	4.5	5.5	17.5	13.5	14.0	11.5	10.5	11.0	16.0	11.0	13.5
15	5.5	4.0	4.5	16.5	13.5	14.5	11.5	10.5	11.0	16.5	11.5	13.5
16	5.0	4.0	4.5	15.0	6.0	10.5	12.0	10.5	11.0	16.0	12.0	14.5
17	5.0	4.0	4.5	15.0	7.5	11.0	12.0	10.5	11.0	16.5	12.5	15.0
18	6.0	4.0	5.0	---	---	---	12.0	11.0	11.5	17.0	12.0	15.5
19	6.5	4.0	5.5	---	---	---	12.0	10.5	11.5	17.0	12.5	15.5
20	5.5	4.0	5.0	---	---	---	12.0	11.0	11.5	17.5	12.5	16.0
21	5.5	4.5	5.0	---	---	---	12.0	11.0	11.5	18.5	13.0	16.5
22	6.5	4.0	5.5	---	---	---	12.5	10.5	11.5	17.5	16.5	17.0
23	8.0	5.5	6.5	---	---	---	14.0	11.0	12.0	18.5	17.0	17.5
24	9.0	5.5	7.5	---	---	---	13.0	11.5	12.0	20.0	16.0	18.0
25	9.5	6.0	9.0	---	---	---	14.0	11.0	12.5	17.5	12.5	15.5
26	10.5	8.0	9.0	---	---	---	12.0	10.5	11.5	18.5	13.5	16.5
27	11.5	8.0	9.5	---	---	---	12.0	11.0	11.5	18.5	12.5	16.0
28	11.0	6.5	8.5	---	---	---	12.5	11.5	12.0	18.0	13.0	16.0
29	---	---	---	---	---	---	12.5	11.0	12.0	22.5	16.5	18.0
30	---	---	---	---	---	---	12.5	11.0	11.5	22.0	17.5	19.0
31	---	---	---	---	---	---	---	---	---	22.0	17.5	19.5
MONTH	11.5	2.5	5.5	---	---	---	---	---	---	22.5	11.0	15.0

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.5	8.0	15.0	24.0	17.5	22.0	---	---	---	24.0	14.5	19.0
2	19.0	14.0	17.0	24.0	19.5	21.5	---	---	---	23.0	14.0	19.0
3	19.0	15.0	17.5	---	---	---	---	---	---	23.0	14.5	19.5
4	24.5	17.0	19.0	---	---	---	---	---	---	22.5	17.0	20.0
5	19.0	15.0	18.0	---	---	---	---	---	---	24.5	20.5	22.0
6	19.5	15.5	17.5	23.5	14.0	17.0	---	---	---	22.5	19.5	21.0
7	20.0	13.5	16.5	23.5	18.5	21.5	---	---	---	22.5	14.5	19.0
8	20.5	15.0	18.5	24.0	18.5	20.5	---	---	---	22.5	13.5	18.5
9	21.0	14.5	17.5	23.0	22.0	22.0	---	---	---	22.5	14.0	20.5
10	21.5	14.5	18.0	23.0	18.0	21.5	23.0	17.5	21.5	22.5	16.0	19.5
11	23.5	16.5	19.0	---	---	---	23.5	18.5	22.0	22.0	16.0	19.5
12	22.0	14.5	18.5	---	---	---	24.0	20.0	22.5	22.0	20.0	21.0
13	21.0	17.0	20.0	---	---	---	23.5	21.0	23.0	20.5	15.5	17.0
14	21.5	18.0	20.0	---	---	---	23.0	16.5	20.5	23.5	17.5	20.5
15	22.0	18.5	21.0	---	---	---	23.5	15.0	21.5	23.5	20.0	22.5
16	26.5	20.5	22.0	---	---	---	25.5	14.5	20.5	23.5	17.0	21.0
17	21.5	16.0	18.5	---	---	---	24.5	15.5	20.5	23.5	16.0	19.5
18	21.0	13.0	20.0	---	---	---	25.5	17.5	22.5	23.0	17.0	21.5
19	22.5	19.0	20.0	---	---	---	25.0	18.5	23.5	23.5	19.5	21.5
20	21.5	20.0	20.5	---	---	---	24.5	22.5	23.5	23.0	15.5	20.0
21	21.5	16.0	19.0	---	---	---	---	---	---	23.5	16.5	20.5
22	21.5	17.5	20.0	---	---	---	---	---	---	23.5	18.5	20.5
23	21.0	16.5	18.5	---	---	---	---	---	---	---	---	---
24	22.5	20.0	21.0	---	---	---	24.0	16.0	21.0	---	---	---
25	22.5	14.5	18.5	---	---	---	24.0	16.0	20.0	---	---	---
26	22.0	18.0	20.5	---	---	---	23.5	14.0	19.5	22.5	19.5	22.0
27	23.0	21.0	22.0	---	---	---	23.5	15.0	20.5	22.0	18.5	21.5
28	24.0	20.5	22.0	---	---	---	23.5	16.5	20.0	22.5	17.0	20.5
29	23.5	13.0	21.5	---	---	---	22.5	17.5	21.0	22.0	15.5	19.5
30	24.0	13.0	21.0	---	---	---	24.5	14.0	19.0	22.0	15.5	19.5
31	---	---	---	---	---	---	24.5	15.0	19.5	---	---	---
MONTH	26.5	8.0	19.5	---	---	---	---	---	---	24.5	13.5	20.0

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	NOV 3,76		DEC 1,76		JAN 17,77		FEB 17,77	
TIME	1130		1115		1200		1230	
TOTAL CELLS/ML	2400		6000		670		3000	
DIVERSITY: DIVISION	1.1		0.5		1.0		0.4	
.CLASS	1.1		0.5		1.0		0.4	
..ORDER	1.4		0.5		1.2		0.9	
...FAMILY	1.6		0.6		1.3		1.0	
....GENUS	2.1		0.6		1.8		1.2	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....ANKISTRODESMUS	21	1	--	-	*	0	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	60	1	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	170	7	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	10	2	*	0
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	260	11	60	1	44	7	41	1
....MELOSIRA	1400#	57	--	-	99	15	2400#	81
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	43	2	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	*	0
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	*	0
...DIATOMACEAE								
....DIATOMA	43	2	--	-	--	-	49	2
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	110	4
....FRAGILARIA	--	-	--	-	--	-	58	2
....SYNEDRA	--	-	--	-	--	-	33	1
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	120	2	*	0	--	-
...NAVICULACEAE								
....NAVICULA	86	4	120	2	8	1	16	1
...NITZSCHIACEAE								
....NITZSCHIA	21	1	60	1	*	0	49	2
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....AGMENELLUM	--	-	--	-	10	2	--	-
....ANACYSTIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	52	8	--	-
....OSCILLATORIA	390#	16	--	-	430#	64	200	7
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	21	1	5500#	92	5	1	*	0
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	*	0	--	-
...PERIDINIACEAE								
....PERIDINIUM	--	-	60	1	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	JUN 22,77		JUL 26,77		SEP 13,77	
TIME	1215		1115		1000	
TOTAL CELLS/ML	1500		2500		1800	
DIVERSITY: DIVISION	1.3		1.1		1.6	
.CLASS	1.3		1.1		1.6	
..ORDER	2.0		1.6		2.2	
...FAMILY	3.1		2.0		3.2	
....GENUS	4.0		2.7		3.7	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	110	7	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	27	2	--	-	29	2
...HYDRODICTYACEAE						
....PEDIASTRUM	13	1	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	13	1	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	27	2	53	2	79	4
....DICTYOSPHAERIUM	210	14	--	-	57	3
....KIRCHNERIELLA	--	-	--	-	*	0
....OOCYSTIS	110	7	--	-	29	2
....TETRAEDRON	*	0	*	0	21	1
....TREUBARIA	20	1	--	-	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	150	10	45	2	110	7
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	20	1	--	-	*	0
...VOLVOCACEAE						
....PANDORINA	110	7	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	--	-	23	1	--	-
..CHLOROCOCCALES						
...OOCYSTACEAE						
....GLOEOACTINIUM	53	3	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	110	7	--	-	64	4
....MELOSIRA	200	13	140	5	160	9
....STEPHANODISCUS	--	-	23	1	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	*	0	--	-	280#	16
...CYMBELLACEAE						
....CYMBELLA	--	-	45	2	--	-
...DIATOMACEAE						
....DIATOMA	13	1	110	4	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	140	9	--	-	--	-
....SYNEDRA	47	3	230	9	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	23	1	--	-
...NAVICULACEAE						
....GYROSIGMA	--	-	*	0	--	-
....NAVICULA	*	0	23	1	36	2
...NITZSCHIACEAE						
....NITZSCHIA	60	4	--	-	50	3
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCOCCALES						
...CHROCOCCACEAE						
....AGMENELLUM	47	3	90	4	29	2
....ANACYSTIS	--	-	75	3	64	4
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	64	4
....CYLINDROSPERMUM	--	-	--	-	340#	20
...OSCILLATORIACEAE						
....LYNGBYA	--	-	930#	36	--	-
....OSCILLATORIA	--	-	--	-	200	11
...RIVULARIACEAE						
....RAPHIDIOPSIS	--	-	--	-	110	6
...OSCILLATORIACEAE						
....PHORMIMIDIUM	--	-	720#	28	--	-

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE TIME	JUN 22,77 1215		JUL 26,77 1115		SEP 13,77 1000	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	27	2	--	-	*	0
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..GYMNODINIALES						
...GYMNODINIACEAE						
....GYMNODINIUM	--	-	--	-	*	0
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	20	1	--	-	--	-

03426500 CUMBERLAND RIVER BELOW OLD HICKORY, TN

LOCATION.--Lat 36°15'39", long 86°40'30", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of bridge on State Highway 45, 1.5 mi (2.4 km) west of Old Hickory, 2.1 mi (3.4 km) east of Madison, 3.3 mi (5.3 km) downstream from Mansker Creek, 4.1 mi (6.6 km) downstream from Old Hickory Dam, and at mile 212.1 (341.3 km).

DRAINAGE AREA.--11,735 mi^2 (30,394 km^2).

PERIOD OF RECORD.--October 1931 to September 1942, October 1947 to current year. Prior to July 1953, published as "at dam 3, near Old Hickory."

REVISED RECORDS.--WSP 923: 1932-39. WSP 1113: 1940(m). WSP 1910: Drainage area, at sites used prior to June 11, 1954. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 380.00 ft (115.824 m) above mean sea level. See WSP 1726 for history of changes prior to Oct. 1, 1956. Present auxiliary gage at Old Hickory dam 4.1 mi (6.6 km) upstream from base gage at same datum, since Apr. 1, 1957.

REMARKS.--Records fair. Flow regulated by six lakes or reservoirs (see p. 144).

AVERAGE DISCHARGE.--41 years (water years 1932-42, 1948-77), 18,920 ft^3/s (535.8 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft^3/s (4,900 m^3/s) Jan. 29, 1937; maximum gage height, 48.13 ft (14.670 m) Mar. 14, 1975; minimum daily discharge, 86 ft^3/s (2.44 m^3/s) Aug. 15, 1936; minimum gage height since filling of Cheatham Lake on Oct. 1, 1956, 3.49 ft (1.064 m) Sept. 10, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 57.4 ft (17.50 m) Dec. 31, 1926, present site and datum, from profile by Corps of Engineers, discharge, 200,000 ft^3/s (5,660 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 118,000 ft^3/s (3,340 m^3/s) Apr. 6 estimated from Old Hickory Dam releases. Minimum daily discharge, 1,130 ft^3/s (32.00 m /s) June 12; minimum gage height, 5.00 ft (1.524 m) several days during year, may have been less during period of missing record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5240	12300	16000	9950	7840	12600	9480	30300	12900	13400	6150	13000
2	3980	19100	12800	17100	7850	8600	9810	30500	9140	11000	8290	10200
3	2460	13100	7690	18700	10500	10000	13800	30500	10200	4900	2850	8530
4	5620	14200	3400	14200	7640	60800	71600	30200	4760	3700	3470	3240
5	6500	8770	3600	13700	7390	44600	114000	21400	3700	3500	3260	2620
6	8760	9120	2300	19000	7060	26400	118000	25200	9090	10600	2690	6400
7	10300	5320	1400	20500	7460	19900	98300	40000	8520	20100	3830	11800
8	10500	9370	6030	16100	8720	13900	82600	35400	10400	21600	2900	13200
9	6240	7590	18100	10200	11900	8380	78500	17000	8660	8730	2900	12900
10	5190	10300	23300	21300	5120	8470	77700	24600	5490	4400	5220	12800
11	6050	10500	20700	21100	6170	12700	74000	21700	1430	7840	5210	8350
12	6390	9770	11200	25400	4100	42700	69600	24000	1130	11900	7070	5300
13	15400	16500	13100	37200	4600	71000	64700	20100	11000	13000	6560	7330
14	13800	6670	19500	20000	13400	52100	61300	23400	8950	12200	3860	10600
15	8530	9980	23400	7820	11900	35200	54100	16100	4710	13000	10100	9200
16	4500	9270	14700	13600	13800	23400	47400	11400	4220	14500	16400	9800
17	5650	10500	6100	21400	14200	19300	51800	27900	3350	10700	18900	12400
18	6130	11200	5860	31500	13200	18700	46800	21000	3480	9270	20200	13700
19	7650	11000	3700	37800	11900	19300	46900	24000	3100	9920	11000	10300
20	8150	6050	6770	25600	7970	21300	48500	23800	3570	10700	7540	11200
21	3320	3070	12900	14100	8540	20800	41300	21200	9410	11100	3520	11100
22	2910	3760	17300	19000	10200	18600	40300	11700	8240	11000	4500	17000
23	4400	6510	14000	12700	10000	19100	40800	7030	8980	5210	8800	6810
24	1410	20300	7000	14800	25600	24900	49100	7250	16300	4420	9040	2440
25	4860	12400	4570	9930	36000	23100	38000	10400	9040	3120	11000	1560
26	12500	5440	2620	19800	18600	23400	29000	10700	10300	11200	11100	12700
27	14000	3800	2770	19500	9330	16300	30600	8930	4100	11500	14200	14400
28	8070	3400	3000	11500	12000	16400	32800	7780	11100	5580	5950	16700
29	8780	3300	2230	19100	---	10900	32200	3430	13000	2390	9250	11800
30	10700	13400	3300	20700	---	11200	31300	3370	10300	3010	12800	11100
31	8550	---	10300	14500	---	9350	---	6580	---	3130	14300	---
TOTAL	226540	285990	299640	577800	312990	723400	1604290	596870	228570	286620	252860	298480
MEAN	7308	9533	9666	18640	11180	23340	53480	19250	7619	9246	8157	9949
MAX	15400	20300	23400	37800	36000	71000	118000	40000	16300	21600	20200	17000
MIN	1410	3070	1400	7820	4100	8380	9480	3370	1130	2390	2690	1560

CAL YR 1976 TOTAL 6140600 MEAN 16780 MAX 77000 MIN 1390
WTR YR 1977 TOTAL 5694050 MEAN 15600 MAX 118000 MIN 1130

NOTE.--No gage-height record Apr. 4-20, Aug. 7 to Sept. 30.

03426800 EAST FORK STONES RIVER AT WOODBURY, TN

LOCATION.--Lat 35°49'41", long 86°04'36", Cannon County, Hydrologic Unit 05130203, on center pier on downstream side of bridge on U. S. Highway 70S, at Woodbury, 0.4 mi (0.6 km) downstream from Doolittle Branch, and at mile 45.6 (73.4 km).

DRAINAGE AREA.--39.1 mi^2 (101.3 km^2).

PERIOD OF RECORD.--Water years 1932-33, 1950, 1954, 1962, occasional low-flow measurements. October 1962 to current year.

REVISED RECORDS.--WSP 1910: Drainage area. WSP 2110: 1963, 1964(M), 1965.

GAGE.--Water-stage recorder. Datum of gage is 676.23 ft (206.115 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--15 years, 69.5 ft^3/s (1.968 m^3/s), 24.14 in/yr (613 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft^3/s (374 m^3/s) Mar. 15, 1973, gage height, 16.75 ft (5.105 m), from rating curve extended above 3,000 ft^3/s (85.0 m^3/s) on basis of velocity-area study and contracted-opening measurement at gage height 16.52 ft (5.035 m) at bridge 4.6 mi (7.4 km) downstream; minimum, 2.7 ft^3/s (0.076 m^3/s) Oct. 30, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 4	1615	*2610	73.9	10.22	3.115	May 22	1130	2080	58.9	8.95	2.728

Minimum discharge 5.9 ft^3/s (0.17 m^3/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	41	17	33	23	74	27	30	21	14	9.4	6.8
2	9.7	32	16	29	21	60	35	29	19	15	8.4	8.0
3	9.1	25	15	29	21	80	145	91	18	12	7.9	7.1
4	8.8	22	14	29	22	902	1730	57	17	11	7.6	6.9
5	8.5	19	14	63	21	279	597	43	16	11	7.4	6.8
6	12	17	15	79	18	144	228	36	16	11	7.2	6.7
7	12	16	62	97	17	94	139	62	15	11	8.1	9.5
8	11	15	51	73	16	72	99	64	14	10	8.7	9.3
9	20	14	36	114	16	61	79	49	14	13	8.7	7.8
10	15	14	29	165	16	53	67	39	13	13	8.5	7.3
11	12	14	26	91	16	48	57	33	13	12	8.7	6.9
12	10	13	62	65	31	803	50	28	13	15	7.9	6.7
13	9.4	13	57	53	35	426	46	26	15	11	10	8.3
14	9.4	12	45	106	27	186	43	24	14	9.8	23	24
15	8.8	13	41	113	23	120	39	22	14	9.3	15	44
16	8.8	12	36	76	20	85	35	21	13	8.8	13	48
17	9.1	12	30	57	19	72	33	19	15	8.5	14	27
18	8.8	12	25	50	19	67	32	19	16	8.4	13	17
19	8.5	13	23	41	19	54	32	18	20	8.2	10	15
20	17	11	26	37	18	51	28	17	23	8.1	8.9	15
21	15	11	24	30	17	45	27	17	17	8.2	8.3	12
22	12	11	22	26	17	42	34	446	14	8.7	8.9	10
23	10	10	21	25	43	37	78	175	15	8.9	10	9.2
24	26	10	20	35	439	35	193	78	16	8.3	11	8.7
25	488	10	29	37	149	33	95	54	25	14	9.4	201
26	131	12	44	40	90	31	64	43	44	12	8.4	107
27	54	13	38	55	120	30	50	36	34	9.2	7.8	136
28	36	18	34	46	92	33	42	31	21	8.3	7.4	76
29	27	26	29	34	---	31	37	30	16	8.6	7.2	39
30	62	20	26	28	---	31	33	28	14	8.7	7.0	27
31	62	---	40	25	---	29	---	24	---	8.8	6.9	---
TOTAL	1142.9	481	967	1781	1385	4108	4194	1689	535	323.8	297.7	914.0
MEAN	36.9	16.0	31.2	57.5	49.5	133	140	54.5	17.8	10.4	9.60	30.5
MAX	488	41	62	165	439	902	1730	446	44	15	23	201
MIN	8.5	10	14	25	16	29	27	17	13	8.1	6.9	6.7
CFSM	.94	.41	.80	1.47	1.27	3.40	3.58	1.39	.46	.27	.25	.78
IN.	1.09	.46	.92	1.69	1.32	3.91	3.99	1.61	.51	.31	.28	.87

CAL YR 1976 TOTAL 21445.4 MEAN 58.6 MAX 1300 MIN 8.0 CFSM 1.50 IN 20.40
WTR YR 1977 TOTAL 17818.4 MEAN 48.8 MAX 1730 MIN 6.7 CFSM 1.25 IN 16.95

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN

LOCATION.--Lat 35°55'06", long 86°20'02", Rutherford County, Hydrologic Unit 05130203, on left bank 100 ft (30 m) upstream from highway bridge, 2.5 mi (4.0 km) southwest of Lascassas, 3.7 mi (6.0 km) downstream from Bradley Creek, 6.0 mi (9.7 km) northeast of the courthouse in Murfreesboro, and at mile 15.4 (24.8 km).

DRAINAGE AREA.--262 mi^2 (679 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to November 1958, May 1963 to current year. Prior to February 1951 monthly discharge only, published in WSP 1726.

REVISED RECORDS.--WSP 1910: Drainage Area. WDR-TN-75-1: 1955(M), 1963(M), 1970(M), 1973(M)(P).

GAGE.--Water-stage recorder. Datum of gage is 507.88 ft (154.802 m) above mean sea level, Sandy Hook datum (levels by Corps of Engineers). Prior to Oct. 1, 1973, water-stage recorder 100 ft (30 m) downstream at same datum.

REMARKS.--Records good. Frequent diurnal fluctuation at low flow caused by small mills above station.

AVERAGE DISCHARGE.--22 years (1950-57, 1964-77), 460 ft^3/s (13.03 m^3/s), 23.84 in/yr (606 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,200 ft^3/s (1,170 m^3/s) Mar. 13, 1975, gage height, 39.48 ft (12,034 m); minimum, 0.2 ft^3/s (0.006 m^3/s) Oct. 23, 1953, gage height, 2.22 ft (0.677 m); minimum daily, 0.4 ft^3/s (0.011 m^3/s) Aug. 31, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 13, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft^3/s (198 m^2/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	1745	9710	275	20.22	6.163	Mar. 12	1630	*14800	419	26.22	7.992
Mar. 4	1015	11900	337	22.93	6.989	Apr. 4	2145	13900	394	25.20	7.681

Minimum daily discharge, 18 ft^3/s (0.510 m^3/s) Oct. 19, Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	394	109	214	84	472	89	154	51	50	27	25
2	43	236	92	167	70	336	84	134	44	45	24	25
3	32	167	81	150	74	367	190	175	40	42	24	24
4	27	125	71	136	76	8460	9840	222	38	39	24	24
5	23	96	64	472	74	2500	6820	157	37	37	25	24
6	23	80	59	690	67	1010	1580	125	34	37	23	23
7	68	67	493	927	59	612	823	584	32	33	23	24
8	57	58	518	593	53	425	564	329	31	20	22	24
9	114	52	278	704	50	314	413	190	29	49	22	24
10	165	49	196	1720	50	252	327	138	28	50	21	24
11	75	45	160	700	50	214	273	110	28	37	20	24
12	49	44	435	450	70	7490	229	96	27	33	18	25
13	36	42	536	350	184	4810	202	84	29	30	19	27
14	29	39	333	640	150	1340	180	75	35	27	75	31
15	26	38	245	1000	119	740	167	70	40	26	123	187
16	22	37	198	600	99	509	150	65	33	26	73	173
17	20	34	160	400	86	367	133	60	33	25	59	154
18	19	32	128	320	80	306	120	55	40	23	90	100
19	18	30	107	250	77	245	113	52	53	22	71	73
20	23	30	98	200	70	216	104	47	50	22	50	92
21	80	29	117	170	64	186	97	49	92	21	38	89
22	59	27	101	150	62	165	123	235	62	21	33	66
23	41	26	92	130	64	141	1260	425	49	21	32	54
24	141	25	83	260	3580	123	1170	154	50	21	39	50
25	5190	24	87	290	1120	112	777	100	113	21	43	1180
26	2050	25	280	350	567	103	454	79	640	21	40	1340
27	542	29	225	470	1030	95	299	69	223	27	33	688
28	273	44	178	240	719	90	223	62	119	26	30	571
29	173	186	145	160	---	98	183	58	77	25	28	255
30	914	154	117	120	---	96	157	66	59	25	28	164
31	874	---	216	100	---	104	---	62	---	27	27	---
TOTAL	11270	2264	6002	13123	8848	32298	27144	4281	2216	929	1204	5584
MEAN	364	75.5	194	423	316	1042	905	138	73.9	30.0	38.8	186
MAX	5190	394	536	1720	3580	8460	9840	584	640	50	123	1340
MIN	18	24	59	100	50	90	84	47	27	20	18	23
CFSM	1.39	.29	.74	1.62	1.21	3.98	3.45	.53	.28	.12	.15	.71
IN.	1.60	.32	.85	1.86	1.26	4.59	3.85	.61	.31	.13	.17	.79

CAL YR 1976 TOTAL 128799.6 MEAN 352 MAX 6640 MIN 7.6 CFSM 1.34 IN 18.29
WTR YR 1977 TOTAL 115163.0 MEAN 316 MAX 9840 MIN 18 CFSM 1.21 IN 16.35

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURE: October 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1975.

REMARKS.--No record, temperature, Oct. 1-22, Nov. 29 to Dec. 21; specific conductance Nov. 29 to Dec. 21, Apr. 21-22, instrument malfunction; exceeded upper limits of monitor Apr. 20, 23, Aug. 12-14, 17-26.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 511 micromhos Aug. 15, 1977; minimum, 119 micromhos Oct. 17, 1976.
WATER TEMPERATURES: Maximum, 31.5°C July 8, 14-16, 1977; minimum, 0.0°C Jan. 21, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 511 micromhos Aug. 15; minimum, 172 micromhos Oct. 25.
WATER TEMPERATURES: Maximum, 31.5°C July 8, 14-16; minimum, 0.0°C Jan. 21.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	367	357	363	366	341	351	---	---	---	396	378	387
2	367	356	363	377	353	366	---	---	---	390	373	381
3	369	358	364	383	357	370	---	---	---	385	378	382
4	368	358	364	391	368	380	---	---	---	388	379	385
5	365	358	363	391	368	380	---	---	---	392	382	387
6	363	361	362	389	360	376	---	---	---	378	346	368
7	364	362	363	380	360	371	---	---	---	384	375	379
8	365	360	363	386	365	375	---	---	---	385	376	381
9	364	359	362	377	353	363	---	---	---	390	384	388
10	384	364	372	372	355	363	---	---	---	377	328	345
11	385	366	375	372	366	368	---	---	---	378	363	369
12	373	358	366	368	355	362	---	---	---	383	374	379
13	369	357	365	365	350	357	---	---	---	386	372	379
14	373	362	368	356	349	352	---	---	---	381	331	363
15	371	361	367	352	340	346	---	---	---	359	334	344
16	371	368	370	351	332	343	---	---	---	383	361	375
17	372	365	368	348	328	340	---	---	---	386	379	383
18	371	361	366	346	323	336	---	---	---	389	382	386
19	366	357	363	342	323	333	---	---	---	390	377	384
20	364	359	360	339	327	334	---	---	---	386	379	384
21	360	350	355	340	326	334	---	---	---	388	374	382
22	365	353	359	337	325	332	389	370	378	386	373	381
23	365	349	356	336	321	329	381	364	373	385	371	378
24	366	344	354	326	315	321	388	366	377	380	376	378
25	356	172	269	327	310	318	379	372	375	378	368	373
26	333	230	295	318	310	315	393	374	381	372	342	356
27	355	317	343	313	303	310	391	367	378	359	332	346
28	368	349	357	322	315	319	390	370	378	372	350	360
29	374	351	363	---	---	---	394	380	388	372	350	363
30	366	280	331	---	---	---	393	368	381	373	358	367
31	339	293	310	---	---	---	390	377	385	378	362	371
MONTH	385	172	355	391	303	348	---	---	---	396	328	374

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	379	359	370	397	382	391	344	332	335	338	316	326
2	379	354	366	400	379	390	331	317	326	334	315	324
3	368	344	359	392	355	383	330	293	324	333	311	322
4	375	354	365	334	221	264	294	177	208	318	283	299
5	375	358	367	354	308	333	309	197	264	303	283	293
6	377	356	367	377	355	363	328	293	311	313	297	304
7	373	356	366	387	364	377	336	305	322	315	197	267
8	374	350	362	384	366	380	348	317	334	325	275	301
9	370	345	359	391	367	380	352	323	339	339	320	329
10	356	342	354	387	362	376	347	317	333	348	327	338
11	357	337	349	382	367	373	344	311	330	345	317	333
12	364	339	357	371	188	265	345	311	327	332	312	323
13	390	365	373	335	250	300	339	307	323	334	306	322
14	392	365	380	355	328	339	332	307	325	330	300	316
15	394	386	390	360	334	347	351	326	338	324	295	311
16	397	384	390	362	346	356	395	356	370	318	292	305
17	394	373	384	369	350	359	460	381	412	311	288	301
18	387	352	373	364	345	354	489	450	471	309	283	298
19	389	357	381	368	353	362	509	479	494	311	289	300
20	391	370	382	367	341	355	---	497	---	307	284	295
21	390	357	378	366	343	353	---	---	---	301	279	291
22	382	353	367	363	347	354	---	---	---	297	258	290
23	374	350	368	365	335	351	---	234	---	242	182	203
24	352	248	297	363	332	348	324	284	309	253	232	242
25	442	330	358	358	326	342	344	311	326	264	253	256
26	372	361	367	355	322	339	360	338	349	272	255	263
27	388	372	378	345	319	332	360	333	348	283	267	274
28	394	372	380	334	323	328	357	335	346	285	262	274
29	---	---	---	331	309	320	352	338	346	279	264	272
30	---	---	---	323	307	316	349	321	336	282	263	273
31	---	---	---	333	314	322	---	---	---	276	258	268
MONTH	442	248	367	400	188	347	509	177	340	348	182	294
		JUNE			JULY			AUGUST			SEPTEMBER	
1	283	266	275	352	343	348	435	409	424	427	391	413
2	283	264	275	366	345	354	452	415	438	424	399	411
3	285	264	275	374	344	358	461	438	452	428	399	417
4	282	258	272	363	334	350	470	446	461	440	405	422
5	297	272	281	364	348	356	475	444	463	441	414	427
6	303	264	285	371	345	357	486	454	472	446	415	430
7	284	268	273	363	339	351	489	451	477	450	436	443
8	296	279	286	348	332	345	493	451	479	447	427	437
9	304	292	297	350	330	339	500	476	491	449	419	435
10	306	292	298	337	315	326	503	478	495	447	416	432
11	321	298	308	326	317	322	510	463	494	462	411	446
12	329	317	324	324	313	320	---	486	---	460	423	444
13	340	327	332	324	308	315	---	481	---	445	411	436
14	347	327	333	329	309	317	---	505	---	442	417	432
15	381	342	355	347	327	336	511	479	497	429	405	419
16	395	349	371	356	341	351	505	471	495	418	409	413
17	376	348	363	371	350	361	---	502	---	418	397	408
18	364	327	344	377	356	368	---	499	---	412	389	401
19	344	316	329	384	357	371	---	508	---	415	398	408
20	343	281	301	383	361	374	---	505	---	410	387	400
21	322	311	316	392	365	381	---	502	---	412	386	400
22	323	291	308	401	389	396	---	509	---	418	386	404
23	302	288	295	401	362	382	---	501	---	423	391	408
24	311	283	295	400	374	386	---	510	---	422	405	413
25	340	300	320	389	358	376	---	507	---	423	185	374
26	345	297	317	377	355	364	---	465	---	331	195	269
27	319	275	297	371	345	360	485	330	389	354	309	324
28	307	282	290	392	374	384	360	331	345	352	321	317
29	315	309	315	404	387	395	384	357	367	369	353	347
30	346	325	332	415	380	397	404	373	407	373	360	353
31	---	---	---	426	398	414	420	391	400	---	---	---
MONTH	395	258	308	426	308	360	511	330	447	462	185	403
YEAR	511	172	356									

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	12.5	12.0	12.0	---	---	---	2.5	1.0	2.0
2	---	---	---	12.5	11.0	12.0	---	---	---	2.0	0.5	1.0
3	---	---	---	13.0	11.5	12.0	---	---	---	3.0	1.0	2.0
4	---	---	---	12.0	10.5	11.0	---	---	---	5.0	3.0	4.0
5	---	---	---	11.0	9.5	10.0	---	---	---	7.0	5.0	6.0
6	---	---	---	10.5	8.5	9.5	---	---	---	7.0	6.5	7.0
7	---	---	---	10.5	9.0	10.0	---	---	---	7.0	6.5	7.0
8	---	---	---	9.0	8.0	8.5	---	---	---	7.0	5.5	6.0
9	---	---	---	10.0	8.0	9.0	---	---	---	7.5	6.5	6.5
10	---	---	---	11.0	9.5	10.5	---	---	---	7.0	5.0	6.0
11	---	---	---	9.5	7.5	8.5	---	---	---	5.0	4.0	4.5
12	---	---	---	8.0	7.0	7.5	---	---	---	4.5	3.5	4.0
13	---	---	---	7.5	6.5	7.0	---	---	---	5.0	4.0	4.5
14	---	---	---	7.0	6.5	7.0	---	---	---	6.5	5.0	6.0
15	---	---	---	8.0	7.0	7.5	---	---	---	7.5	6.0	7.0
16	---	---	---	8.5	6.5	7.5	---	---	---	7.5	4.0	6.0
17	---	---	---	8.5	6.5	7.5	---	---	---	3.5	2.5	3.0
18	---	---	---	9.5	7.0	8.0	---	---	---	2.5	1.0	2.0
19	---	---	---	10.0	8.0	9.0	---	---	---	2.0	0.5	1.0
20	---	---	---	10.0	9.0	9.5	---	---	---	2.5	1.5	2.0
21	---	---	---	9.0	7.5	8.5	---	---	---	2.0	0.0	1.5
22	---	---	---	8.0	6.5	7.0	4.0	3.0	3.5	2.0	0.5	1.0
23	12.0	11.0	11.5	7.0	5.0	6.0	4.0	3.0	3.5	2.5	1.0	2.0
24	13.0	12.0	12.5	8.0	6.5	7.5	4.0	2.0	3.0	3.0	2.5	2.5
25	15.0	13.0	14.5	9.0	6.5	8.0	4.0	3.0	3.5	4.5	3.0	4.0
26	15.0	13.5	14.0	10.0	9.0	9.5	6.0	3.5	5.0	6.0	3.5	5.0
27	13.0	12.0	12.5	12.0	10.0	11.0	7.0	5.5	6.0	7.0	5.0	6.0
28	12.0	11.0	11.5	11.0	7.0	9.0	8.0	6.5	7.0	6.0	3.5	5.5
29	12.0	10.0	11.0	---	---	---	7.0	5.0	6.0	3.5	2.0	2.5
30	13.0	11.0	12.0	---	---	---	6.0	4.0	5.0	3.0	1.0	2.0
31	13.0	12.5	12.5	---	---	---	4.5	2.0	3.5	2.5	0.5	1.5
MONTH	---	---	---	13.0	5.0	9.0	---	---	---	7.5	0.0	4.0
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	0.5	1.5	10.5	9.5	10.0	18.5	16.5	17.0	21.0	17.0	19.0
2	3.0	0.5	1.5	10.5	9.5	10.0	19.0	16.5	18.0	21.0	18.0	19.5
3	3.5	2.5	3.0	11.0	10.0	10.5	18.0	15.5	17.0	21.0	18.5	19.5
4	5.5	3.0	4.5	12.5	10.0	11.0	16.5	14.5	15.5	21.5	19.0	20.0
5	5.5	4.0	5.0	12.5	11.0	11.5	16.0	12.0	13.5	23.0	18.5	21.0
6	4.5	2.5	3.5	12.5	11.5	12.0	13.5	12.0	12.5	24.0	20.0	22.0
7	3.5	2.0	2.5	12.0	11.0	11.5	16.5	12.5	14.5	23.0	19.0	21.0
8	3.5	1.0	2.0	12.5	11.0	11.5	17.0	13.5	15.0	22.0	19.0	20.5
9	4.5	1.5	3.0	12.5	11.5	12.0	16.5	14.5	15.5	21.0	19.0	19.5
10	5.0	2.5	4.0	14.5	12.0	13.0	18.5	16.0	16.5	20.0	19.0	19.0
11	6.5	4.0	5.0	14.0	12.5	13.5	20.5	16.0	18.0	20.0	18.5	18.5
12	7.5	6.0	6.5	16.0	13.5	15.5	21.5	17.0	19.0	20.5	18.0	19.5
13	9.0	7.0	8.0	14.5	13.0	13.5	21.5	18.0	19.5	20.0	17.5	19.0
14	8.5	7.0	8.0	15.0	14.0	14.5	19.0	19.0	19.0	21.0	18.5	19.5
15	8.0	6.5	7.0	16.5	13.5	15.0	20.5	18.5	19.5	22.0	19.0	20.0
16	6.5	5.0	6.0	16.0	14.5	15.0	21.0	19.0	20.0	23.0	20.0	21.0
17	6.0	4.0	5.0	15.0	13.5	14.0	22.0	19.0	20.5	23.5	20.5	22.0
18	8.0	6.0	7.0	16.5	14.0	15.0	21.5	20.0	21.0	24.5	21.0	22.5
19	8.0	7.0	7.5	15.0	13.0	14.0	22.0	20.5	21.0	24.5	21.0	22.5
20	8.0	6.5	7.5	16.5	13.5	14.5	22.5	20.5	21.5	24.5	21.0	23.0
21	8.0	6.0	7.0	14.5	13.5	14.0	21.5	20.0	21.0	25.0	22.0	23.5
22	10.0	7.0	8.5	14.0	12.0	12.5	21.0	19.5	20.0	23.0	20.0	22.5
23	10.5	9.0	10.0	14.0	11.0	12.5	20.0	17.0	18.0	20.0	17.5	18.5
24	11.5	9.5	10.5	14.0	11.5	12.5	17.5	16.0	17.0	21.5	17.5	19.0
25	12.5	11.0	11.5	15.5	12.0	13.5	17.0	15.5	16.0	21.0	19.0	20.0
26	14.0	11.0	12.5	16.0	13.0	14.5	16.0	14.5	15.0	23.5	19.5	21.0
27	14.5	11.5	13.0	17.0	14.5	15.5	17.0	15.0	15.5	23.5	20.5	22.0
28	11.0	10.0	10.5	17.0	15.5	16.0	17.5	15.5	16.0	24.0	21.0	22.0
29	---	---	---	18.5	15.0	17.0	17.0	15.5	16.5	25.5	21.0	23.0
30	---	---	---	21.0	17.0	19.0	19.0	16.5	17.5	26.5	23.0	24.5
31	---	---	---	19.5	17.0	18.5	---	---	---	27.0	23.0	25.0
MONTH	14.5	0.5	6.5	21.0	9.5	13.5	22.5	12.0	17.5	27.0	17.0	21.0

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	23.5	24.5	28.0	25.5	26.5	28.0	25.5	27.0	27.5	25.5	26.5
2	26.0	23.0	24.0	28.0	25.0	26.5	27.0	25.0	26.0	27.5	25.5	26.5
3	25.5	22.5	24.0	28.0	24.5	26.0	26.0	25.0	26.0	28.5	25.5	26.5
4	26.0	22.5	24.5	29.0	25.5	27.0	27.0	26.0	26.5	28.0	26.0	27.0
5	26.5	23.0	25.0	29.0	26.5	28.0	28.0	26.0	26.5	27.5	25.5	26.5
6	26.5	24.5	25.5	30.0	26.5	28.5	28.0	26.5	27.5	27.0	25.0	26.0
7	24.5	22.0	23.5	30.0	27.0	29.0	28.5	27.0	28.0	25.5	24.0	25.0
8	22.5	20.5	22.0	31.5	28.5	29.5	29.0	27.5	28.0	27.0	24.0	25.5
9	23.5	21.0	22.5	30.0	27.5	28.5	29.0	28.0	28.5	27.0	24.5	25.5
10	22.5	20.5	21.5	29.0	27.5	28.0	29.0	26.5	27.5	27.0	24.5	25.0
11	24.5	21.0	23.0	28.5	27.0	27.5	28.5	26.5	27.5	25.5	23.5	24.0
12	26.0	23.0	24.5	28.5	26.0	27.5	29.0	27.0	27.0	24.5	23.0	23.5
13	27.0	24.5	26.0	30.5	26.5	28.0	28.5	27.0	28.0	24.5	23.0	24.0
14	26.0	24.0	25.0	31.5	27.5	29.0	28.0	26.0	27.5	24.5	23.0	24.0
15	26.0	23.5	24.5	31.5	28.0	29.5	26.5	22.5	24.0	24.5	22.0	23.5
16	26.5	24.5	25.5	31.5	28.0	29.5	26.5	24.0	25.0	23.5	22.0	23.0
17	26.0	25.0	25.5	31.0	28.5	29.5	25.5	24.0	25.0	24.5	22.0	23.5
18	27.0	24.0	25.5	30.0	28.5	29.0	26.5	23.5	25.0	25.5	22.5	24.0
19	26.5	25.0	25.5	30.0	28.0	29.0	25.5	24.5	25.0	25.0	24.5	24.5
20	26.5	25.0	26.0	31.0	28.5	29.5	26.0	24.0	25.0	25.0	23.5	24.5
21	27.0	25.0	26.0	30.0	28.5	29.5	26.0	24.5	25.0	24.5	22.5	23.5
22	27.5	25.5	26.0	29.5	27.5	28.5	26.5	25.0	26.0	24.5	22.0	23.0
23	27.5	25.5	26.0	29.5	27.0	28.0	26.5	25.0	26.0	24.5	22.5	23.0
24	28.0	25.5	26.5	28.5	28.0	28.0	27.0	25.0	26.0	23.5	22.0	24.0
25	27.0	24.5	26.0	28.5	27.0	28.0	28.0	25.5	26.5	23.0	21.5	22.5
26	25.0	21.0	21.0	29.0	26.5	27.5	29.0	25.5	26.5	22.0	20.0	21.5
27	24.5	21.5	23.0	28.0	26.0	27.0	28.5	25.5	27.0	21.5	20.5	21.0
28	26.0	22.0	24.0	27.0	25.5	26.5	28.5	26.0	27.0	21.5	19.5	20.5
29	26.0	24.0	25.0	26.0	25.0	25.5	28.0	26.0	27.0	20.5	19.5	20.5
30	28.0	24.5	26.0	28.0	25.0	26.5	28.5	26.0	27.0	20.0	19.0	19.5
31	---	---	---	28.5	26.5	27.0	28.0	26.5	27.0	---	---	---
MONTH	28.0	20.5	24.5	31.5	24.5	28.0	29.0	22.5	26.5	28.5	19.0	24.0
YEAR	31.5	0.0	17.0									

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN

LOCATION.--35°51'25", long 86°24'43", Rutherford County, Hydrologic Unit 05130203, on right bank at upstream abutment of Manson Pike bridge, 900 ft (274 m) downstream from Lytle Creek, 1.4 mi (2.3 km) northwest of courthouse in Murfreesboro, and at mile 16.1 (25.9 km).

DRAINAGE AREA.--165 mi^2 (427 km^2), includes 15 mi^2 (39 km^2) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 542.29 ft (165.290 m) above mean sea level.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft^3/s (742 m^3/s) Mar. 13, 1975, gage height, 23.22 ft (7.077 m); minimum, 0.42 ft^3/s (0.012 m^3/s) Sept. 9, 1973, gage height, 1.18 ft (0.360 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	1900	6360	180	10.06	3.066	Apr. 4	2245	7960	225	11.76	3.584
Feb. 24	0645	4370	124	7.96	2.426	Apr. 23	1000	4150	118	7.72	2.353
Mar. 4	1145	9040	256	12.73	3.880	Sept.25	2130	4340	123	7.93	2.417
Mar. 12	1930	*12600	357	15.59	4.752						

Minimum discharge, 1.3 ft^3/s (0.037 m^3/s) Aug. 13, minimum gage height, 1.33 ft (0.405 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	316	118	180	74	298	87	217	9.5	32	4.2	4.6
2	5.5	231	104	143	68	235	91	164	8.5	24	3.7	4.6
3	8.5	190	93	131	65	242	123	140	8.0	18	3.1	4.6
4	15	154	85	121	62	5520	5120	123	7.4	15	2.9	5.2
5	11	131	76	273	58	1310	2640	109	6.6	13	2.4	4.8
6	17	113	71	388	53	730	840	93	6.1	10	2.2	4.4
7	27	99	123	591	46	508	531	104	5.5	9.2	2.0	5.5
8	35	89	193	353	41	368	404	95	5.0	8.3	1.7	5.7
9	99	79	148	470	38	320	320	77	5.0	97	1.6	4.6
10	137	71	126	818	36	277	273	63	4.6	74	1.6	4.2
11	87	65	116	368	35	250	238	55	4.6	40	1.7	3.5
12	69	61	277	265	47	5760	203	49	4.6	28	1.6	3.1
13	51	55	294	220	85	2340	184	43	5.7	23	1.3	8.5
14	42	51	210	409	87	882	154	38	16	18	46	18
15	33	48	180	520	77	578	134	35	11	14	79	55
16	26	44	154	311	71	439	121	32	7.1	11	57	102
17	25	41	129	217	62	353	106	28	8.3	11	58	74
18	21	35	113	187	59	307	93	25	12	15	106	62
19	20	34	99	157	57	257	83	24	23	10	66	61
20	30	33	97	143	53	242	74	24	31	8.5	41	97
21	29	30	102	123	49	217	69	20	55	7.1	28	76
22	35	27	87	109	47	197	261	19	27	6.4	22	49
23	35	25	81	97	68	177	1940	18	26	6.6	17	35
24	81	23	74	106	1760	154	723	19	28	5.9	18	28
25	2640	22	76	164	531	137	554	22	77	5.7	16	889
26	925	23	167	131	334	126	373	18	235	5.7	14	910
27	363	19	151	143	648	116	273	16	116	5.0	11	281
28	246	51	129	140	429	111	220	14	76	4.6	8.8	235
29	190	220	109	109	---	106	187	13	54	4.6	7.1	164
30	622	151	99	91	---	109	164	13	41	4.6	5.7	129
31	609	---	197	83	---	99	---	11	---	4.4	5.2	---
TOTAL	6539.5	2531	4078	7561	5040	22765	16583	1721	924.5	539.6	635.8	3328.3
MEAN	211	84.4	132	244	180	734	553	55.5	30.8	17.4	20.5	111
MAX	2640	316	294	818	1760	5760	5120	217	235	97	106	910
MIN	5.5	19	71	83	35	99	69	11	4.6	4.4	1.3	3.1
CFSM	1.28	.51	.80	1.48	1.09	4.45	3.35	.34	.19	.11	.12	.67
IN.	1.47	.57	.92	1.70	1.14	5.13	3.74	.39	.21	.12	.14	.75

CAL YR 1976 TOTAL 72803.4 MEAN 199 MAX 2850 MIN 2.5 CFSM 1.21 IN 16.41
WTR YR 1977 TOTAL 72246.7 MEAN 198 MAX 5760 MIN 1.3 CFSM 1.20 IN 16.29

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1973 to current year.
pH: July 1973 to current year.
WATER TEMPERATURES: July 1973 to current year.
DISSOLVED OXYGEN: July 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1973.

REMARKS.--Interruptions in the record Oct. 1-22 was due to malfunction of instruments.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 479 micromhos Sept. 29, 1975; minimum, 103 micromhos Apr. 4, 1977.
pH: Maximum, 8.7 units Oct. 10, 1973, Dec. 21, 22, 23, 1974; minimum, 6.6 units May 15, 1975.
WATER TEMPERATURES: Maximum, 33.5°C July 8, 1977; minimum, 0.5°C Jan. 19, 1977.
DISSOLVED OXYGEN: Maximum, 14.8 mg/L; minimum, 1.3 mg/L Aug. 30, 1973.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 456 micromhos Dec. 7; minimum, 103 micromhos Apr. 4.
pH: Maximum, 8.6 units Feb. 1, 2, 4; minimum, 7.3 units Aug. 12, 13.
WATER TEMPERATURE: Maximum, 33.5°C July 8; minimum 0.5°C Jan. 19.
DISSOLVED OXYGEN: Maximum, 14.8 mg/L Jan. 1, 2, 3; minimum, 2.3 mg/L Aug. 13.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	385	325	357	401	385	392	421	410	415
2	---	---	---	404	387	395	389	385	387	418	413	416
3	---	---	---	416	401	409	398	388	394	424	406	413
4	---	---	---	423	416	420	414	396	403	427	414	419
5	---	---	---	427	422	425	420	411	414	423	415	419
6	---	---	---	432	425	429	428	420	422	425	358	396
7	---	---	---	435	427	431	456	427	436	366	351	359
8	---	---	---	436	428	431	439	431	436	369	347	355
9	---	---	---	435	428	432	443	438	441	394	370	384
10	---	---	---	434	428	431	441	436	439	391	275	305
11	---	---	---	432	424	429	445	434	437	360	303	335
12	---	---	---	431	425	429	448	433	438	383	363	373
13	---	---	---	429	422	425	445	395	424	396	386	392
14	---	---	---	423	420	421	397	390	392	403	383	394
15	---	---	---	422	417	420	415	398	408	377	309	337
16	---	---	---	420	412	416	426	415	422	349	313	329
17	---	---	---	415	409	411	430	425	428	377	353	367
18	---	---	---	411	405	407	433	425	429	397	380	391
19	---	---	---	405	400	403	431	423	427	409	401	407
20	---	---	---	402	397	400	429	419	423	427	412	418
21	---	---	---	400	394	397	428	422	424	426	419	423
22	---	---	---	398	392	395	425	418	421	428	421	425
23	404	390	400	395	391	393	422	415	419	430	422	426
24	409	366	388	393	389	390	421	414	417	451	423	431
25	423	153	298	390	384	387	419	403	411	426	417	422
26	329	179	263	388	382	386	418	403	413	423	411	419
27	389	332	365	384	372	379	420	412	417	419	405	413
28	413	391	403	383	378	380	415	408	412	412	400	407
29	428	417	423	424	382	403	412	403	409	408	398	404
30	430	332	401	424	403	418	408	394	403	408	399	404
31	324	277	297	---	---	---	420	383	399	412	398	405
MONTH	---	---	---	436	325	408	456	383	417	451	275	394

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	413	406	410	429	404	418	326	314	320	360	344	352
2	416	408	412	437	431	435	331	307	314	353	344	347
3	418	409	413	447	374	430	329	278	317	352	344	348
4	420	416	416	369	154	222	306	103	163	354	345	351
5	424	414	419	358	255	318	267	111	204	350	342	347
6	420	411	415	384	355	373	313	270	293	349	341	344
7	416	410	413	400	385	392	329	313	325	343	312	331
8	410	407	408	407	400	402	333	326	329	342	331	337
9	407	402	404	411	406	409	339	325	332	342	336	339
10	401	365	383	415	409	412	342	324	334	342	337	340
11	397	394	395	417	408	413	331	316	326	342	338	340
12	406	392	397	415	115	244	332	313	324	341	336	338
13	408	396	401	320	161	262	330	312	320	338	331	335
14	413	399	406	361	326	347	336	303	324	334	323	329
15	421	399	409	384	368	378	336	319	327	330	318	325
16	423	409	415	395	385	390	332	318	325	326	316	321
17	424	409	415	398	392	395	329	320	323	323	317	320
18	423	390	412	400	396	399	328	317	322	321	313	316
19	419	415	417	395	389	392	330	322	326	317	310	313
20	422	416	419	387	378	383	330	324	327	316	305	310
21	424	417	420	378	372	376	330	314	326	314	299	306
22	418	415	417	370	361	367	316	242	302	309	298	304
23	418	308	403	364	352	358	286	176	216	311	303	307
24	379	221	279	355	341	348	302	233	273	312	305	309
25	394	303	357	349	333	340	336	302	323	309	300	306
26	426	397	414	347	332	339	354	337	346	306	293	301
27	425	389	408	345	330	337	359	352	356	305	299	302
28	402	387	392	340	331	335	360	353	357	304	300	302
29	---	---	---	337	330	334	362	356	360	305	301	303
30	---	---	---	334	324	328	363	356	359	308	302	304
31	---	---	---	333	326	328	---	---	---	309	304	307
MONTH	426	221	402	447	115	361	363	103	313	360	293	324

		JUNE			JULY			AUGUST			SEPTEMBER	
1	313	307	309	332	314	323	295	284	290	317	308	313
2	315	309	312	332	316	326	294	279	288	313	304	310
3	316	311	314	333	318	327	294	283	290	313	303	309
4	318	313	316	336	323	329	296	287	291	314	307	311
5	319	309	315	334	319	327	296	281	290	314	304	310
6	319	310	315	332	315	325	295	277	288	313	304	309
7	316	308	313	334	314	323	293	280	288	312	307	309
8	318	309	314	329	310	319	293	280	287	314	306	308
9	319	308	314	321	283	304	294	282	288	311	304	308
10	319	308	315	312	306	309	295	267	290	311	300	306
11	317	307	313	316	303	311	296	277	289	309	300	304
12	315	304	310	315	306	310	296	276	287	307	298	303
13	313	296	306	308	297	303	291	272	283	306	268	299
14	301	261	288	304	294	299	291	218	262	277	243	269
15	290	263	276	305	295	299	287	246	260	287	250	266
16	294	281	287	308	295	302	299	289	294	325	294	318
17	297	283	290	306	295	301	297	289	294	335	324	329
18	305	291	296	314	294	303	296	288	291	347	333	339
19	296	289	293	298	292	296	297	283	289	360	328	341
20	302	278	285	298	289	294	300	295	298	360	334	345
21	297	280	289	297	288	293	302	297	299	381	358	369
22	298	291	294	296	291	293	307	299	303	386	378	382
23	325	292	302	295	287	292	311	302	307	387	381	384
24	299	290	293	293	285	291	314	305	309	389	381	385
25	301	219	281	294	287	291	309	303	307	386	159	326
26	292	221	265	293	284	290	311	305	308	253	153	204
27	334	291	312	293	283	289	313	306	310	329	257	296
28	355	335	346	296	288	292	313	302	309	383	331	361
29	351	335	342	295	288	291	313	303	309	408	383	397
30	336	319	329	293	286	290	314	302	309	420	409	415
31	---	---	---	293	284	289	316	303	311	---	---	---
MONTH	355	219	304	336	283	304	316	218	294	420	153	324
YEAR	456	103	350									

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

PH (UNITS), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	7.8	7.7	8.1	8.0	8.3	8.2	8.6	8.4	8.2	8.0
2	---	---	8.0	7.8	8.1	8.0	8.3	8.2	8.6	8.4	8.2	8.1
3	---	---	8.0	7.9	8.1	8.0	8.2	8.1	8.5	8.4	8.1	8.0
4	---	---	8.0	7.9	8.2	8.1	8.2	8.1	8.6	8.4	8.0	7.7
5	---	---	8.1	8.0	8.2	8.2	8.2	8.1	8.5	8.4	7.8	7.7
6	---	---	8.1	8.0	8.2	8.1	8.0	7.9	8.5	8.3	7.9	7.8
7	---	---	8.1	8.0	8.1	8.1	8.0	7.9	8.4	8.3	8.0	7.9
8	---	---	8.1	8.1	8.2	8.1	8.0	7.9	8.4	8.3	8.1	7.9
9	---	---	8.1	8.1	8.2	8.2	8.0	8.0	8.3	8.3	8.1	8.0
10	---	---	8.1	8.1	8.2	8.1	8.0	7.8	8.3	8.2	8.1	8.0
11	---	---	8.1	8.1	8.1	8.0	8.0	7.9	8.3	8.2	8.1	7.9
12	---	---	8.1	8.1	8.1	7.9	8.2	8.0	8.3	8.2	8.0	7.8
13	---	---	8.1	8.1	8.0	8.0	8.3	8.2	8.2	8.1	7.8	7.8
14	---	---	8.1	8.1	8.0	7.9	8.2	8.1	8.3	8.1	7.9	7.8
15	---	---	8.1	8.0	8.1	8.0	8.1	8.0	8.3	8.2	7.9	7.8
16	---	---	8.0	8.0	8.2	8.0	8.2	8.0	8.3	8.2	8.0	7.9
17	---	---	8.2	8.1	8.2	8.1	8.3	8.1	8.3	8.2	8.0	7.9
18	---	---	8.2	8.1	8.2	8.0	8.3	8.2	8.3	8.1	8.1	7.9
19	---	---	8.2	8.1	8.2	8.1	8.4	8.2	8.3	8.3	8.0	8.0
20	---	---	8.1	8.1	8.1	8.1	8.4	8.3	8.4	8.3	8.1	7.9
21	---	---	8.1	8.0	8.2	8.1	8.4	8.2	8.5	8.3	8.0	7.9
22	---	---	8.1	8.0	8.2	8.1	8.4	8.3	8.5	8.4	8.1	8.0
23	8.0	7.9	8.1	8.0	8.2	8.2	8.4	8.3	8.4	8.3	8.1	8.0
24	8.0	7.8	8.1	8.1	8.3	8.2	8.3	8.2	8.3	7.9	8.1	8.0
25	7.9	7.5	8.1	8.0	8.2	8.1	8.3	8.2	8.0	7.8	8.1	7.8
26	7.8	7.5	8.1	8.0	8.2	8.1	8.4	8.2	8.1	8.0	8.1	7.9
27	7.9	7.7	8.1	8.0	8.2	8.1	8.4	8.2	8.1	8.0	8.1	7.9
28	8.0	7.9	8.0	7.9	8.3	8.1	8.5	8.3	8.1	8.0	8.1	8.1
29	8.0	7.9	8.1	7.9	8.3	8.1	8.5	8.3	---	---	8.2	8.1
30	8.0	7.8	8.1	8.0	8.3	8.2	8.5	8.3	---	---	8.2	8.1
31	7.7	7.8	---	---	8.3	8.2	8.5	8.4	---	---	8.1	8.1
MONTH	8.0	7.5	8.2	7.7	8.3	7.9	8.5	7.8	8.6	7.8	8.2	7.6

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	8.1	8.1	8.0	8.0	7.9	8.3	7.9	7.9	7.5	8.0	7.8
2	8.1	8.0	8.1	7.9	7.9	7.8	8.2	7.9	7.9	7.5	8.0	7.7
3	8.1	8.0	8.1	7.9	7.9	7.8	8.2	7.9	7.8	7.5	8.0	7.7
4	8.0	7.7	8.0	8.0	7.9	7.8	8.1	7.9	7.7	7.4	7.9	7.8
5	7.8	7.6	8.2	8.0	7.9	7.7	8.0	7.9	7.7	7.4	7.9	7.8
6	8.0	7.8	8.1	8.0	8.0	7.8	8.0	7.9	7.7	7.4	8.0	7.7
7	8.0	7.9	8.1	8.0	8.0	7.8	8.0	7.8	7.7	7.4	7.8	7.8
8	8.1	7.9	8.0	8.0	8.1	7.8	7.9	7.8	7.7	7.4	7.8	7.8
9	8.2	8.0	8.1	8.0	8.1	7.9	7.9	7.7	7.8	7.4	7.8	7.8
10	8.2	8.0	8.2	8.1	8.0	7.9	7.8	7.7	7.8	7.4	7.9	7.8
11	8.2	8.0	8.3	8.1	8.0	7.8	7.9	7.7	7.7	7.4	7.8	7.8
12	8.2	7.9	8.4	8.1	8.1	7.9	7.9	7.7	7.8	7.3	7.8	7.5
13	8.2	8.0	8.4	8.2	8.0	7.9	8.1	7.8	7.8	7.3	7.8	7.8
14	8.1	8.0	8.4	8.2	8.0	7.7	8.1	7.8	7.8	7.4	8.0	7.7
15	8.3	8.1	8.4	8.2	8.1	7.7	8.0	7.8	7.8	7.5	8.1	7.7
16	8.2	8.1	8.3	8.2	8.1	7.8	7.9	7.7	7.8	7.6	8.0	7.7
17	8.2	8.1	8.2	8.1	8.2	7.8	7.9	7.7	7.7	7.5	8.1	7.8
18	8.2	8.0	8.3	8.1	8.0	7.7	7.9	7.8	7.7	7.4	8.1	7.9
19	8.1	8.0	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.6	8.0	7.8
20	8.2	8.0	8.3	8.1	8.0	7.7	7.9	7.8	7.8	7.6	7.8	7.7
21	8.2	8.0	8.2	8.1	7.9	7.8	7.9	7.8	7.7	7.6	7.9	7.8
22	7.9	7.8	8.2	8.1	8.1	7.9	7.8	7.8	7.7	7.6	8.0	7.8
23	7.8	7.6	8.2	8.0	8.0	7.8	7.8	7.5	7.7	7.5	7.9	7.8
24	7.9	7.7	8.2	7.9	7.9	7.8	7.7	7.5	7.7	7.6	7.9	7.8
25	8.0	7.9	8.2	8.0	7.9	7.6	7.7	7.5	7.6	7.5	7.8	7.4
26	8.1	8.0	8.2	7.9	7.8	7.5	7.7	7.5	7.7	7.6	7.5	7.4
27	8.2	8.0	8.2	8.0	7.7	7.6	7.8	7.5	7.7	7.6	7.6	7.4
28	8.1	8.1	8.1	8.0	7.9	7.7	7.6	7.4	7.7	7.6	7.7	7.6
29	8.0	8.0	8.1	8.0	8.0	7.8	7.5	7.4	7.7	7.5	7.8	7.7
30	8.2	8.0	8.0	7.9	8.1	7.9	7.5	7.5	7.9	7.6	7.8	7.8
31	---	---	8.1	7.9	---	---	7.6	7.5	7.9	7.7	---	---
MONTH	8.3	7.6	8.4	7.9	8.2	7.5	8.3	7.4	7.9	7.3	8.1	7.4
YEAR	8.6	7.3										

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	13.0	11.0	12.0	5.0	4.0	4.5	2.0	1.5	1.5
2	---	---	---	12.5	11.0	11.5	5.5	5.0	5.5	1.5	1.0	1.5
3	---	---	---	12.5	11.5	12.0	5.5	5.0	5.5	2.5	1.5	2.0
4	---	---	---	12.0	11.0	11.5	6.5	5.5	6.0	4.0	3.0	3.5
5	---	---	---	11.0	10.0	10.5	7.5	6.0	6.5	5.5	4.0	4.5
6	---	---	---	10.0	9.5	9.5	7.5	6.0	7.0	6.0	5.0	5.5
7	---	---	---	10.5	9.5	10.0	7.5	7.0	7.0	6.0	5.0	5.5
8	---	---	---	9.5	8.0	9.0	7.0	5.5	6.0	5.5	4.5	5.0
9	---	---	---	9.5	8.0	8.5	5.5	4.5	5.0	6.0	5.5	6.0
10	---	---	---	11.0	9.0	10.0	6.0	5.0	5.5	6.0	3.0	4.5
11	---	---	---	10.0	8.5	9.5	8.0	6.5	7.0	3.5	2.5	3.0
12	---	---	---	8.5	7.0	7.5	9.5	8.0	8.5	4.0	3.0	3.5
13	---	---	---	7.0	6.5	6.5	9.5	8.5	9.0	5.0	3.0	4.0
14	---	---	---	6.5	6.0	6.0	8.5	7.0	8.0	6.0	5.0	5.5
15	---	---	---	7.0	6.0	6.0	9.0	8.0	8.5	6.5	5.5	6.0
16	---	---	---	7.5	6.5	7.5	9.0	8.0	8.5	6.0	3.0	4.5
17	---	---	---	9.0	7.5	8.0	8.5	7.5	8.0	3.0	1.5	2.0
18	---	---	---	9.0	7.5	8.5	8.5	8.0	8.0	2.0	1.0	1.5
19	---	---	---	10.0	8.5	9.0	9.5	8.5	9.0	2.0	0.5	1.0
20	---	---	---	10.0	9.5	9.5	10.0	8.0	9.5	2.0	1.5	2.0
21	---	---	---	10.0	9.0	9.5	8.0	4.5	6.0	2.0	1.0	1.5
22	---	---	---	9.5	8.5	9.0	4.5	3.0	4.0	2.0	2.0	2.0
23	12.5	12.0	12.5	8.5	7.5	8.0	4.0	3.0	3.5	2.5	2.0	2.5
24	13.5	12.5	13.0	8.5	7.5	7.5	4.0	3.0	3.5	3.5	2.5	3.0
25	15.0	14.0	14.5	8.5	7.0	8.0	4.0	3.0	3.5	4.5	3.5	4.0
26	14.5	13.0	14.0	10.0	8.0	8.5	5.0	4.0	4.5	5.5	3.5	4.5
27	13.0	12.0	12.5	12.0	10.0	11.0	6.0	4.0	5.0	6.0	5.0	5.5
28	12.0	10.5	11.5	10.5	8.0	9.0	6.5	6.0	6.5	6.0	4.5	5.0
29	12.0	10.0	11.0	8.5	5.5	6.5	6.5	5.0	5.5	4.0	2.0	3.0
30	12.5	11.5	12.0	5.5	4.5	4.5	5.0	4.5	4.5	2.0	2.0	2.0
31	12.5	12.0	12.0	---	---	---	4.5	2.5	3.5	3.0	2.0	2.5
MONTH	---	---	---	13.0	4.5	9.0	10.0	2.5	6.0	6.5	0.5	3.5

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

TEMPERATURE (DEG. C) OF WATER. WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	2.0	2.5	11.0	9.0	10.0	18.0	16.5	17.5	21.0	18.5	19.5
2	4.0	2.0	3.0	11.0	8.5	10.0	18.5	16.5	17.5	21.0	20.0	20.5
3	5.0	3.5	4.0	11.0	10.5	10.5	18.0	16.5	17.5	21.5	20.5	21.0
4	5.5	4.5	5.0	13.0	10.0	11.5	16.5	14.5	15.5	21.0	21.0	21.0
5	6.0	5.0	5.5	13.0	11.5	12.0	15.5	12.0	13.5	23.0	21.0	22.0
6	5.0	4.0	4.5	12.5	11.5	12.0	14.0	11.0	12.5	24.0	22.5	23.0
7	4.5	3.5	4.0	12.5	10.0	11.5	16.5	12.5	14.5	24.0	22.5	23.5
8	4.0	3.0	3.5	13.5	10.5	12.0	18.0	14.5	16.0	23.5	23.0	23.0
9	4.0	3.0	3.5	13.0	11.0	12.0	18.5	14.5	16.5	23.0	21.5	22.5
10	5.0	3.5	4.0	14.5	12.0	13.0	19.5	16.0	17.5	21.5	20.0	21.0
11	7.0	4.5	6.0	14.5	13.5	14.0	21.0	17.5	19.5	21.0	19.0	20.0
12	8.5	6.5	7.5	16.0	14.0	14.5	22.0	18.5	20.0	21.5	19.0	20.0
13	10.0	8.0	9.0	15.0	12.5	14.0	22.0	19.5	21.0	22.5	19.5	21.0
14	9.5	8.0	9.0	16.0	13.0	14.5	21.0	20.0	20.5	22.5	20.0	21.0
15	8.5	6.5	8.0	16.5	14.0	15.5	21.5	20.5	21.0	23.0	20.5	22.0
16	7.0	5.5	6.5	16.5	14.5	15.5	22.0	20.5	21.5	24.5	21.5	23.0
17	6.5	5.0	5.5	14.5	13.5	14.0	22.5	21.0	21.5	26.0	22.5	24.0
18	8.5	5.5	7.0	16.5	14.0	15.0	22.5	21.5	22.0	26.5	23.0	24.5
19	9.5	7.5	8.5	15.5	14.0	14.5	22.5	21.5	22.0	26.0	23.5	25.0
20	9.0	8.0	8.5	15.5	13.0	14.5	22.5	21.0	22.0	26.0	24.0	25.0
21	9.0	7.0	8.0	14.5	13.5	14.0	22.0	21.0	21.5	26.5	24.5	25.5
22	9.5	7.0	8.5	13.5	12.0	13.0	21.0	19.0	20.0	25.5	24.5	25.0
23	11.5	9.0	10.0	13.5	11.0	12.5	19.0	18.0	18.5	26.0	24.0	24.5
24	12.0	10.5	11.0	14.0	12.0	13.0	19.0	17.5	18.0	25.5	24.0	24.5
25	12.5	11.0	11.5	15.0	13.0	14.0	17.5	16.0	17.0	25.5	24.5	25.0
26	14.5	12.0	13.5	15.5	14.5	15.0	17.0	15.0	16.0	26.0	24.0	25.0
27	14.5	11.0	12.5	16.5	15.5	16.0	18.0	14.5	16.0	27.0	24.5	26.0
28	11.0	9.5	10.5	17.5	16.5	17.0	18.0	16.5	17.0	28.5	25.0	26.5
29	---	---	---	17.5	16.5	17.0	18.0	17.5	18.0	29.0	25.5	27.0
30	---	---	---	20.5	17.5	19.0	19.0	17.5	18.0	29.0	25.5	27.5
31	---	---	---	20.0	18.0	19.0	---	---	---	30.0	26.5	28.0
MONTH	14.5	2.0	7.0	20.5	8.5	14.0	22.5	11.0	18.5	30.0	18.5	23.5

	JUNE			JULY			AUGUST			SEPTEMBER		
1	29.5	26.5	27.5	30.0	27.5	28.5	30.5	27.5	28.5	30.5	27.5	29.0
2	29.0	25.5	27.0	29.0	27.0	28.0	31.0	26.0	28.0	30.5	27.0	28.5
3	28.5	25.0	26.5	29.5	27.0	28.0	30.5	26.0	28.5	30.0	27.0	28.5
4	29.0	24.5	27.0	30.0	27.0	28.5	29.5	26.5	28.0	30.0	26.5	28.0
5	29.0	25.0	27.0	30.5	27.5	29.0	31.5	26.5	28.5	31.0	26.5	28.5
6	29.5	25.5	27.5	31.5	28.0	29.5	32.0	27.5	30.0	29.0	27.0	27.5
7	27.0	24.0	25.0	32.0	28.5	30.5	32.0	28.0	30.0	27.5	26.0	27.0
8	27.0	22.5	24.5	33.5	29.0	31.0	32.5	28.0	30.0	28.0	26.0	26.5
9	26.5	23.0	24.5	30.5	28.0	29.5	30.5	28.0	29.5	29.0	25.5	27.0
10	26.5	22.0	24.0	30.5	29.5	30.0	30.0	27.5	28.5	28.5	25.5	27.0
11	28.0	22.5	25.5	29.5	28.5	29.0	32.0	26.5	29.0	28.0	24.0	25.5
12	29.5	24.5	27.0	30.0	28.0	29.0	32.0	27.5	30.0	27.0	23.0	25.0
13	29.5	25.5	27.5	30.5	28.0	29.5	32.0	28.0	29.5	26.5	24.0	25.0
14	26.5	25.0	26.0	31.0	29.0	30.0	29.0	26.5	27.5	25.0	24.0	24.5
15	28.0	25.0	26.5	31.5	29.5	30.0	28.0	26.5	27.0	26.0	23.5	24.5
16	29.5	25.5	27.5	33.0	29.0	31.0	29.5	27.0	28.0	25.0	24.5	24.5
17	27.5	26.0	26.5	32.5	29.5	30.5	28.0	27.0	27.5	25.5	24.0	24.5
18	30.0	25.5	27.5	32.0	29.0	30.5	27.0	26.5	26.5	26.0	24.0	25.0
19	29.0	26.5	27.5	32.5	29.0	30.5	26.5	25.5	26.0	25.5	24.5	25.0
20	28.5	26.5	27.5	32.5	29.5	30.5	26.0	24.5	25.5	25.0	24.0	24.5
21	28.5	26.0	27.5	32.5	29.5	31.0	27.5	25.0	26.0	24.0	23.0	24.0
22	29.5	27.0	28.0	31.0	29.5	30.0	28.0	25.5	26.5	24.0	22.5	23.0
23	29.5	27.5	28.0	32.5	28.5	30.5	29.0	26.0	27.0	24.0	22.5	23.0
24	30.0	27.0	28.5	31.5	29.0	30.0	28.5	26.5	27.5	23.5	23.0	23.0
25	29.5	25.5	27.5	30.5	29.0	29.5	29.0	26.0	27.5	23.0	20.5	22.0
26	27.0	25.0	26.0	31.0	28.0	29.5	29.0	27.0	28.0	22.0	20.0	21.0
27	27.5	26.5	27.0	31.0	27.0	28.5	29.5	27.5	28.0	22.0	21.0	21.5
28	29.0	26.5	27.5	29.0	27.5	28.0	30.0	27.0	28.0	21.5	20.5	21.0
29	28.5	27.0	27.5	29.0	27.0	27.5	31.0	27.0	28.5	21.0	20.0	20.5
30	29.5	27.0	28.0	31.0	27.0	29.0	31.5	27.5	29.0	20.0	19.5	19.5
31	---	---	---	31.5	27.5	29.5	31.5	27.5	29.0	---	---	---
MONTH	30.0	22.0	27.0	33.5	27.0	29.5	32.5	24.5	28.0	31.0	19.5	25.0
YEAR	33.5	0.5	17.5									

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	11.0	10.7	10.9	13.4	12.9	13.7	14.8	13.8	14.2
2	---	---	---	11.1	10.6	10.9	13.1	12.7	12.9	14.8	14.2	14.4
3	---	---	---	10.6	10.0	10.3	14.0	12.7	13.4	14.8	13.9	14.1
4	---	---	---	10.6	10.0	10.3	13.1	12.6	12.9	14.2	13.3	13.6
5	---	---	---	10.7	10.0	10.5	13.1	12.5	12.8	13.7	12.3	13.3
6	---	---	---	10.9	10.5	10.7	12.9	12.2	12.6	12.8	12.5	12.6
7	---	---	---	10.7	10.2	10.5	12.3	11.9	12.1	12.9	12.5	12.7
8	---	---	---	10.8	10.6	10.7	13.5	12.4	12.9	13.2	12.7	12.9
9	---	---	---	11.1	10.5	10.8	13.7	13.3	13.5	12.7	12.3	12.4
10	---	---	---	11.7	10.0	10.4	13.7	12.9	13.2	13.4	12.4	13.0
11	---	---	---	10.5	10.1	10.3	12.9	12.1	12.4	13.9	13.4	13.6
12	---	---	---	10.7	10.3	10.5	12.1	11.5	11.7	13.8	13.5	13.6
13	---	---	---	11.1	10.5	10.9	12.0	11.5	11.7	13.5	12.9	13.2
14	---	---	---	11.3	11.0	11.1	12.3	11.9	12.1	12.8	12.2	12.3
15	---	---	---	12.0	11.2	11.6	11.9	11.7	11.8	12.5	12.1	12.3
16	---	---	---	12.3	11.8	12.0	12.1	11.3	11.6	13.3	12.2	12.7
17	---	---	---	12.6	11.8	12.0	12.2	11.7	11.9	14.1	13.1	13.6
18	---	---	---	12.6	11.7	12.1	12.3	11.8	12.0	14.0	13.3	13.6
19	---	---	---	12.4	11.6	11.8	12.2	11.4	11.7	14.2	13.6	13.8
20	---	---	---	12.3	11.3	11.7	11.7	11.0	11.3	14.0	13.4	13.6
21	---	---	---	12.2	11.4	11.8	13.2	11.6	12.4	14.0	13.6	13.7
22	---	---	---	12.3	11.4	11.8	13.7	13.3	13.5	14.0	13.6	13.7
23	9.7	9.4	9.5	12.8	11.4	12.1	13.9	13.4	13.6	14.0	13.4	13.6
24	9.5	9.0	9.3	13.1	12.3	12.6	14.1	13.5	13.8	13.7	12.8	13.2
25	9.2	6.9	8.5	13.2	12.4	12.7	14.0	12.9	13.5	13.1	12.0	12.5
26	8.3	8.0	8.2	12.7	11.4	12.3	13.6	12.8	13.1	12.3	11.6	11.9
27	9.2	9.1	9.1	12.0	11.2	11.4	13.4	12.9	13.2	12.3	11.4	11.7
28	9.2	9.0	9.1	12.0	10.4	11.6	13.3	12.4	12.6	12.6	11.5	11.9
29	9.9	9.5	9.8	12.9	11.4	12.4	13.1	12.5	12.7	13.2	12.4	12.6
30	10.3	9.7	10.1	13.4	12.4	13.1	13.4	12.7	13.1	13.5	12.9	13.1
31	10.5	10.1	10.3	---	---	---	14.3	13.0	13.6	13.8	12.9	13.4
MONTH	---	---	---	13.4	10.0	11.4	14.3	11.0	12.7	14.8	11.4	13.1

	FEBRUARY			MARCH			APRIL			MAY		
1	14.0	13.1	13.6	11.6	11.2	11.3	10.3	9.7	10.0	9.7	9.2	9.5
2	14.2	13.1	13.6	11.7	11.3	11.5	10.1	9.4	9.8	9.4	9.0	9.1
3	13.9	12.9	13.4	11.2	10.7	10.9	9.9	9.5	9.6	9.3	8.7	8.9
4	14.2	12.7	12.8	10.7	9.7	10.0	10.0	8.8	9.4	9.0	8.7	8.8
5	13.8	12.9	13.3	10.5	10.0	10.4	10.2	8.8	9.8	8.9	8.6	8.8
6	14.0	12.7	13.4	10.6	10.4	10.5	10.7	10.1	10.4	8.8	8.4	8.6
7	14.2	13.2	13.8	10.9	10.6	10.8	10.4	9.7	10.2	8.6	8.2	8.4
8	14.4	13.7	14.1	11.1	10.6	10.9	10.0	9.7	9.9	8.6	8.3	8.5
9	14.4	14.0	14.2	10.9	10.5	10.7	10.0	9.5	9.8	9.1	8.5	8.8
10	14.3	13.9	14.1	10.7	10.3	10.5	9.8	9.2	9.6	9.8	8.9	9.3
11	14.0	13.2	13.6	10.2	9.8	9.9	9.4	8.9	9.2	10.2	9.3	9.7
12	13.2	12.2	12.7	9.8	5.6	8.3	9.2	8.8	9.0	10.5	9.5	9.9
13	12.2	11.4	11.8	10.1	8.7	9.8	9.1	8.6	8.8	10.2	9.5	9.8
14	12.2	11.4	11.7	10.0	9.5	9.8	9.1	8.5	8.8	10.4	9.5	9.8
15	12.2	11.7	11.9	9.8	9.4	9.6	9.2	8.6	8.9	10.2	9.3	9.7
16	12.9	12.0	12.5	9.8	9.4	9.6	9.1	8.5	8.8	9.9	9.0	9.4
17	13.4	12.4	12.9	9.9	9.6	9.8	8.9	8.4	8.7	9.5	8.7	9.1
18	13.4	12.4	12.9	10.1	9.3	9.8	8.7	8.1	8.4	9.3	8.5	8.9
19	12.8	12.0	12.4	10.3	9.7	10.0	8.5	8.0	8.2	9.1	8.1	8.6
20	12.5	11.8	12.1	10.5	10.0	10.3	8.7	8.0	8.3	9.0	7.9	8.4
21	12.8	12.0	12.4	10.4	10.0	10.2	8.6	8.0	8.3	8.7	7.8	8.2
22	12.6	12.2	12.5	11.0	10.2	10.5	8.7	8.0	8.3	8.5	7.7	8.0
23	12.2	10.8	11.8	11.0	10.7	10.8	8.9	8.5	8.7	9.7	7.5	8.4
24	10.9	10.1	10.6	11.0	10.6	10.7	9.3	9.0	9.2	9.5	8.4	8.9
25	10.9	10.5	10.7	10.8	10.4	10.6	9.8	9.2	9.6	9.2	8.3	8.8
26	10.5	9.8	10.3	10.8	10.3	10.5	10.1	9.7	9.9	9.2	7.9	8.5
27	10.8	9.8	10.3	10.6	10.0	10.2	10.2	9.7	10.0	8.9	6.6	7.8
28	11.4	10.9	11.2	10.2	9.7	10.0	9.8	9.5	9.6	7.5	6.6	7.0
29	---	---	---	10.3	9.9	10.1	9.7	9.3	9.5	7.7	6.7	7.1
30	---	---	---	10.3	9.7	10.0	9.7	9.5	9.6	7.9	6.8	7.3
31	---	---	---	10.0	9.6	9.8	---	---	---	7.9	6.5	7.2
MONTH	14.4	9.8	12.5	11.7	5.6	10.3	10.7	8.0	9.3	10.5	6.5	8.7

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.0	6.4	7.0	8.3	7.0	7.5	8.4	4.8	6.3	7.9	4.7	6.5
2	7.6	6.1	6.7	8.4	6.8	7.5	9.1	4.1	6.2	7.8	4.4	5.5
3	7.8	7.0	8.8	8.3	6.5	7.2	8.0	3.9	5.6	7.8	4.5	5.8
4	7.8	5.7	6.7	8.0	6.3	7.0	7.1	3.5	5.1	7.6	4.6	5.6
5	8.3	5.7	6.8	7.9	6.0	6.9	8.1	3.7	5.4	7.9	4.8	5.9
6	8.0	5.9	6.5	8.0	5.6	6.6	8.4	3.2	5.4	7.8	4.9	5.9
7	8.8	6.0	7.2	8.1	5.5	6.5	8.1	3.0	5.1	7.0	5.0	5.7
8	8.9	6.3	7.4	7.8	5.2	6.4	8.8	3.0	5.6	7.5	5.3	6.0
9	9.4	6.6	7.6	6.9	5.4	6.4	7.9	2.9	5.4	7.7	5.0	6.1
10	9.2	6.6	7.7	6.5	6.1	6.3	7.5	3.2	5.0	8.6	5.0	6.3
11	9.0	6.0	6.9	6.9	5.0	5.8	9.4	3.3	5.9	8.5	5.2	6.3
12	8.7	6.1	7.3	6.9	5.9	6.3	9.5	3.1	5.8	8.1	4.8	6.2
13	8.8	6.2	7.2	7.5	6.0	6.7	9.2	2.3	5.4	7.5	5.0	6.2
14	7.4	6.3	6.9	7.8	6.1	6.8	6.3	3.5	5.3	7.6	6.2	6.8
15	8.0	6.2	7.0	7.7	5.8	6.6	6.3	5.9	6.1	7.9	6.4	6.9
16	8.4	6.5	7.4	7.5	5.6	6.4	6.8	6.2	6.5	7.2	6.8	7.0
17	8.1	5.7	6.6	7.7	5.6	6.4	6.8	6.0	6.4	7.6	7.0	7.3
18	7.6	6.0	6.7	7.4	5.4	6.2	7.0	6.0	6.6	7.7	6.9	7.2
19	7.4	6.6	7.0	7.1	4.8	5.7	7.2	6.8	7.0	7.2	6.7	6.9
20	7.3	8.3	6.8	7.5	4.8	5.9	8.1	6.9	7.3	7.1	6.7	6.9
21	7.2	6.7	6.9	7.5	4.6	5.7	7.8	6.8	7.2	7.5	7.1	7.3
22	7.5	6.6	7.0	7.3	4.7	5.6	7.9	6.7	7.1	8.0	7.3	7.5
23	7.3	6.4	6.8	7.9	4.9	6.1	8.2	6.5	7.1	7.9	7.1	7.4
24	7.1	6.6	6.5	8.0	5.1	6.0	7.8	6.5	7.0	7.8	7.1	7.4
25	7.0	6.1	6.4	8.0	5.1	6.1	7.9	6.5	7.0	7.6	6.7	7.1
26	6.5	6.2	6.3	8.3	5.1	6.3	7.9	6.4	7.0	8.1	7.7	7.9
27	6.7	6.4	6.6	8.8	5.4	6.8	7.7	6.1	6.8	7.9	7.8	7.9
28	7.2	6.9	7.1	7.7	5.2	6.2	8.3	6.1	7.0	8.1	7.8	8.0
29	7.7	7.1	7.4	7.9	5.3	6.3	8.4	5.5	6.7	8.2	8.0	8.1
30	7.9	7.0	7.5	8.2	5.2	6.4	8.3	5.4	6.5	8.2	8.1	8.2
31	---	---	---	8.2	4.8	6.4	8.4	5.1	6.4	---	---	---
MONTH	9.4	5.7	7.0	8.8	4.6	6.4	9.5	2.3	6.2	8.6	4.4	6.8
YEAR	14.8	2.3	9.5									

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN

LOCATION.--Lat 35°54'10", long 86°25'48", Rutherford County, Hydrologic Unit 05130203, on left bank at Murfreesboro waste treatment plant outfall, 3,000 ft (914 m) downstream from Sinking Creek, 4.5 mi (7.2 km) northwest of the courthouse in Murfreesboro, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--177 mi^2 (458 km^2), includes 17 mi^2 (44 km^2) without surface drainage.

PERIOD OF RECORD.--July 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 514.95 ft (156.957 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--5 years, 369 ft^3/s (10.45 m^3/s), 28.31 in/yr (719 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft^3/s (878 m^3/s) Mar. 13, 1975, gage height, 23.80 ft (7.254 m); minimum, 4.2 ft^3/s (0.119 m^3/s) Aug. 9, 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft^3/s (105 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	2030	5740	163	13.19	4.020
Feb. 24	0930	3720	105	9.94	3.030
Mar. 4	1245	9130	259	16.59	5.057
Mar. 12	2200	*13200	374	18.87	5.752
Apr. 5	0130	8330	236	15.99	4.874

Minimum discharge, 4.2 ft^3/s (0.119 m^3/s) Aug. 9, 10, gage height, 1.49 ft (0.454 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	434	147	230	97	458	106	271	15	38	7.8	8.5
2	13	316	121	178	90	371	104	200	13	31	7.3	8.4
3	13	241	111	160	83	360	145	162	13	25	7.2	7.6
4	18	192	94	152	81	5630	4050	138	12	21	6.9	6.9
5	21	156	85	300	81	1530	3180	119	11	18	6.5	7.0
6	25	128	79	545	72	855	987	104	10	16	6.5	7.0
7	30	115	125	789	63	623	674	127	9.4	15	5.6	7.8
8	44	105	254	518	60	498	526	106	8.9	14	5.2	9.9
9	79	90	192	518	55	426	441	87	8.7	90	5.0	8.8
10	136	81	156	1220	51	371	383	72	8.4	99	5.8	7.4
11	83	70	136	555	48	339	336	63	8.3	53	6.5	6.3
12	65	69	316	398	61	5000	277	57	7.8	39	5.5	6.0
13	47	61	425	316	105	3840	235	50	7.9	30	5.4	6.7
14	38	56	286	472	115	1010	189	44	14	26	25	29
15	32	55	230	752	105	697	143	39	23	21	79	42
16	26	50	192	458	94	545	122	37	15	17	65	109
17	22	46	160	324	85	463	106	33	13	15	48	71
18	20	40	132	266	81	412	96	31	19	21	103	60
19	18	38	118	213	76	356	89	29	24	17	74	71
20	31	35	118	187	70	329	81	28	39	15	45	86
21	30	32	125	160	65	278	73	28	51	13	31	77
22	39	31	115	143	61	248	324	26	35	12	25	52
23	39	30	102	125	79	218	1870	26	32	12	19	38
24	61	28	94	136	1770	188	932	24	34	11	21	31
25	2520	27	97	219	738	168	742	23	53	10	19	492
26	1360	28	203	178	487	151	548	25	278	10	17	1210
27	508	30	203	183	817	142	436	20	126	9.7	16	352
28	340	38	160	192	611	134	367	18	82	9.4	13	279
29	236	286	136	152	---	131	307	17	60	9.6	11	170
30	677	197	121	121	---	129	246	16	47	9.4	9.7	128
31	841	---	247	108	---	121	---	16	---	8.3	8.6	---
TOTAL	7427	3105	5080	10268	6201	26021	18115	2036	1078.4	735.4	710.5	3395.3
MEAN	240	104	164	331	221	839	604	65.7	35.9	23.7	22.9	113
MAX	2520	434	425	1220	1770	5630	4050	271	278	99	103	1210
MIN	13	27	79	108	48	121	73	16	7.8	8.3	5.0	6.0
CFSM	1.36	.59	.93	1.87	1.25	4.74	3.41	.37	.20	.13	.13	.64
IN.	1.56	.65	1.07	2.16	1.30	5.47	3.81	.43	.23	.15	.15	.71

CAL YR 1976 TOTAL 81941.8 MEAN 224 MAX 2580 MIN 7.5 CFSM 1.27 IN 17.22
WTR YR 1977 TOTAL 84172.6 MEAN 231 MAX 5630 MIN 5.0 CFSM 1.31 IN 17.69

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN

LOCATION.--Lat 35°56'25", long 86°27'54", Rutherford County, Hydrologic Unit 05130203, near right bank at county bridge on Sulphur Springs Road, 400 ft (122 m) upstream from Nice's Mill dam, 1.6 mi (2.6 km) downstream from Overall Creek, 4.2 mi (6.8 km) southeast of Smyrna, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--237 mi^2 (614 km^2), includes 43 mi^2 (111 km^2) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft (152.400 m) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--12 years, 445 ft^3/s (12.60 m^3/s), 25.50 in/yr (648 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,800 ft^3/s (1,810 m^3/s) Mar. 13, 1975, gage height, 19.18 ft (5.846 m) from rating curve extended above 14,000 ft^3/s (396 m^3/s) on basis of area-velocity study at gage height 17.11 ft (5.215 m) and flood routing from Murfreesboro gage and Overall Creek at gage heights 16.65 ft (5.075 m) and 17.39 ft (5.300 m); minimum, 2.2 ft^3/s (0.062 m^3/s) Nov. 6-8, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 10,000 ft^3/s (283 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 3	1500	1120	317	11.39	3.472	Mar. 12	2300	*14500	411	13.29	4.051

Minimum discharge, 16 ft^3/s (0.45 m^3/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	567	170	363	153	697	163	337	33	69	20	35
2	17	356	146	320	139	551	156	288	31	59	18	33
3	16	276	136	250	133	519	184	242	29	50	18	32
4	17	229	127	200	127	7920	5340	212	27	46	17	30
5	20	192	114	300	120	2460	4610	188	23	41	17	28
6	21	166	108	689	117	1420	1560	170	21	37	17	27
7	35	149	146	956	108	1060	1060	200	20	33	17	29
8	52	133	282	681	103	816	808	184	20	31	17	33
9	55	124	229	599	97	665	649	156	20	67	17	33
10	120	114	196	1500	94	591	535	136	20	136	20	29
11	108	100	180	781	91	482	446	117	20	85	29	25
12	94	91	343	551	100	6980	369	105	20	69	25	17
13	72	85	497	432	153	4970	312	97	20	64	23	23
14	64	83	343	624	180	1630	271	88	25	52	97	50
15	57	77	276	1120	166	1130	240	80	39	46	225	80
16	50	72	238	697	153	917	216	72	33	41	133	156
17	44	69	204	583	143	764	195	67	29	37	114	120
18	39	64	184	410	136	649	179	64	33	50	192	100
19	35	62	166	340	130	543	168	62	35	57	146	103
20	41	62	156	270	124	482	154	62	52	52	100	149
21	57	59	153	240	120	425	144	59	62	44	77	139
22	55	59	146	205	114	376	1180	55	55	37	62	100
23	62	57	136	180	120	324	2860	55	50	46	55	77
24	85	55	130	170	2500	282	1460	52	52	39	52	64
25	2110	52	127	260	1140	247	1120	50	55	33	55	350
26	1590	50	204	238	764	225	816	52	300	31	50	1620
27	657	57	238	247	1220	208	608	48	192	27	48	453
28	369	67	204	251	965	200	467	44	130	25	41	369
29	265	260	180	221	---	192	369	37	100	25	39	238
30	665	216	163	184	---	184	312	39	83	23	39	184
31	1090	---	247	163	---	177	---	35	---	21	37	---
TOTAL	7980	4003	6169	14025	9510	38086	26951	3453	1629	1473	1817	4726
MEAN	257	133	199	452	340	1229	898	111	54.3	47.5	58.6	158
MAX	2110	567	497	1500	2500	7920	5340	337	300	136	225	1620
MIN	16	50	108	163	91	177	144	35	20	21	17	17
CFSM	1.08	.56	.84	1.91	1.44	5.19	3.79	.47	.23	.20	.25	.67
IN.	1.25	.63	.97	2.20	1.49	5.98	4.23	.54	.26	.23	.29	.74

CAL YR 1976 TOTAL 118527 MEAN 324 MAX 3500 MIN 15 CFSM 1.37 IN 18.60
WTR YR 1977 TOTAL 119822 MEAN 328 MAX 7920 MIN 16 CFSM 1.38 IN 18.81

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to current year.
WATER TEMPERATURE: March 1974 to current year.

INSTRUMENTATION.--Water-temperature recorder March 1974 to September 1975, water quality monitor October 1975 to current year.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	461	454	457	---	---	---	---	---	---			
2	463	454	460	---	---	---	---	---	---			
3	464	458	462	---	---	---	---	---	---			
4	468	451	464	---	---	---	---	---	---			
5	474	465	469	---	---	---	---	---	---			
6	480	472	475	---	---	---	---	---	---			
7	485	480	483	---	---	---	---	---	---			
8	472	445	456	---	---	---	---	---	---			
9	441	422	435	---	---	---	---	---	---			
10	411	387	399	---	---	---	---	---	---			
11	405	383	394	---	---	---	---	---	---			
12	421	400	414	---	---	---	---	---	---			
13	418	415	417	---	---	---	---	---	---			
14	415	409	412	---	---	---	---	---	---			
15	412	406	409	---	---	---	---	---	---			
16	415	408	411	---	---	---	---	---	---			
17	413	408	410	---	---	---	---	---	---			
18	---	---	---	---	---	---	---	---	---			
19	---	---	---	---	---	---	---	---	---			
20	---	---	---	416	409	413	---	---	---			
21	---	---	---	418	411	415	---	---	---			
22	---	---	---	417	413	415	436	429	433			
23	---	---	---	419	412	415	434	429	432			
24	---	---	---	413	410	412	438	429	434			
25	---	---	---	418	410	412	431	422	427			
26	---	---	---	411	406	409	424	407	418			
27	---	---	---	408	403	406	415	405	411			
28	---	---	---	408	404	407	433	413	422			
29	---	---	---	406	355	372	436	424	430			
30	---	---	---	---	---	---	422	417	419			
31	---	---	---	---	---	---	---	---	---			
MONTH	---	---	---	---	---	---	---	---	---			

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	370	361	364	380	378	379
2	---	---	---	---	---	---	364	356	363	377	373	375
3	---	---	---	---	---	---	363	319	352	377	371	374
4	403	399	401	---	---	---	321	165	247	382	374	378
5	402	395	399	---	---	---	322	281	306	382	373	377
6	397	391	394	---	---	---	342	324	333	383	373	378
7	397	391	393	---	---	---	350	343	347	379	345	361
8	399	392	395	---	---	---	356	350	353	362	355	359
9	407	395	399	373	367	371	357	351	354	365	358	362
10	413	401	406	377	371	374	359	352	355	367	362	365
11	---	---	---	375	370	373	358	353	356	374	366	368
12	---	---	---	355	124	240	357	351	355	374	367	371
13	---	---	---	284	132	208	357	353	355	377	368	373
14	---	---	---	326	290	313	361	352	356	375	369	373
15	---	---	---	344	328	336	364	355	360	375	372	373
16	---	---	---	358	344	351	368	364	366	375	369	371
17	---	---	---	343	333	337	370	365	368	372	363	367
18	---	---	---	385	337	359	373	367	369	367	361	365
19	---	---	---	358	339	344	373	367	369	383	363	373
20	---	---	---	365	327	344	380	371	375	385	376	381
21	---	---	---	343	327	336	379	371	376	374	367	370
22	---	---	---	338	317	327	365	273	312	385	371	378
23	---	---	---	339	299	320	331	206	267	391	380	385
24	---	---	---	341	311	327	334	249	294	391	382	388
25	---	---	---	359	321	338	362	332	346	358	342	347
26	---	---	---	362	333	347	376	363	371	358	343	351
27	---	---	---	384	351	363	383	377	381	368	357	364
28	---	---	---	383	368	374	386	380	384	367	346	352
29	---	---	---	391	355	368	385	378	383	360	341	351
30	---	---	---	367	359	364	384	381	382	348	341	344
31	---	---	---	369	357	363	---	---	---	354	325	339
MONTH	---	---	---	---	---	---	386	165	350	391	325	367

		JUNE			JULY			AUGUST			SEPTEMBER	
1	332	323	328	357	345	349	---	---	---	432	418	425
2	334	326	329	363	347	354	---	---	---	425	421	423
3	333	325	329	410	366	383	---	---	---	---	---	---
4	333	325	328	424	399	408	---	---	---	---	---	---
5	342	333	338	366	353	356	---	---	---	---	---	---
6	352	336	342	360	356	359	---	---	---	---	---	---
7	412	352	381	361	356	359	---	---	---	---	---	---
8	412	336	349	---	---	---	---	---	---	404	399	402
9	343	333	338	---	---	---	---	---	---	---	---	---
10	341	332	336	---	---	---	---	---	---	---	---	---
11	343	331	336	---	---	---	---	---	---	---	---	---
12	338	332	336	---	---	---	---	---	---	---	---	---
13	339	335	337	---	---	---	460	452	456	---	---	---
14	351	336	343	---	---	---	457	368	438	---	---	---
15	413	347	365	---	---	---	432	378	402	---	---	---
16	422	372	376	---	---	---	415	336	357	---	---	---
17	425	380	383	---	---	---	356	339	344	---	---	---
18	425	373	380	---	---	---	369	359	365	---	---	---
19	413	363	369	---	---	---	367	357	361	---	---	---
20	401	348	353	---	---	---	371	362	366	---	---	---
21	396	341	351	---	---	---	376	367	370	---	---	---
22	378	322	329	---	---	---	384	375	378	---	---	---
23	365	315	320	---	---	---	391	380	385	---	---	---
24	356	309	313	---	---	---	397	390	393	---	---	---
25	367	317	320	---	---	---	399	390	395	---	---	---
26	371	242	277	---	---	---	400	391	396	---	---	---
27	333	256	273	---	---	---	406	397	401	---	---	---
28	353	296	302	---	---	---	410	404	408	---	---	---
29	377	314	328	---	---	---	419	409	413	---	---	---
30	387	337	343	---	---	---	428	417	422	---	---	---
31	---	---	---	---	---	---	431	422	427	---	---	---
MONTH	425	242	338	---	---	---	---	---	---	---	---	---

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.0	18.0	18.5	---	---	---	---	---	---			
2	19.0	18.5	19.0	---	---	---	---	---	---			
3	19.5	18.5	19.0	---	---	---	---	---	---			
4	20.0	18.5	19.0	---	---	---	---	---	---			
5	20.0	19.0	19.5	---	---	---	---	---	---			
6	20.5	19.0	19.5	---	---	---	---	---	---			
7	19.0	17.5	18.0	---	---	---	---	---	---			
8	17.5	16.5	17.0	---	---	---	---	---	---			
9	16.5	16.5	16.5	---	---	---	---	---	---			
10	17.0	15.5	16.5	---	---	---	---	---	---			
11	16.5	16.0	16.0	---	---	---	---	---	---			
12	17.0	16.0	16.5	---	---	---	---	---	---			
13	18.0	16.5	17.0	---	---	---	---	---	---			
14	18.0	17.0	17.5	---	---	---	---	---	---			
15	17.5	17.0	17.0	---	---	---	---	---	---			
16	17.5	16.5	17.0	---	---	---	---	---	---			
17	16.5	16.0	16.5	---	---	---	---	---	---			
18	---	---	---	---	---	---	---	---	---			
19	---	---	---	---	---	---	---	---	---			
20	---	---	---	12.0	11.5	12.0	---	---	---			
21	---	---	---	11.5	10.5	11.0	---	---	---			
22	---	---	---	10.5	9.5	10.5	6.0	5.0	5.5			
23	---	---	---	9.5	9.0	9.5	5.5	5.0	5.0			
24	---	---	---	9.5	8.5	9.0	5.5	4.5	5.0			
25	---	---	---	10.5	9.5	10.0	5.5	5.0	5.0			
26	---	---	---	11.5	10.5	11.0	5.5	5.0	5.0			
27	---	---	---	13.0	12.0	12.5	6.0	4.5	5.5			
28	---	---	---	12.5	9.5	11.5	6.5	6.0	6.5			
29	---	---	---	10.0	7.0	8.0	6.0	5.5	6.0			
30	---	---	---	---	---	---	6.0	4.5	5.5			
31	---	---	---	---	---	---	---	---	---			
MONTH	---	---	---	---	---	---	---	---	---			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	17.0	16.5	16.5	20.0	18.0	19.0
2	---	---	---	---	---	---	18.5	16.5	17.5	20.0	19.0	19.5
3	---	---	---	---	---	---	18.0	16.5	17.5	20.0	19.0	19.5
4	8.5	6.5	7.5	---	---	---	16.5	13.5	14.5	20.0	19.5	19.5
5	8.0	7.5	7.5	---	---	---	14.5	12.5	13.5	21.5	19.5	20.5
6	7.5	5.5	6.5	---	---	---	16.5	13.5	15.0	22.5	20.5	21.5
7	6.0	5.0	5.5	---	---	---	17.5	15.0	16.5	22.0	21.0	21.5
8	6.0	4.5	5.0	---	---	---	17.5	15.5	16.5	21.5	20.5	21.0
9	7.0	5.0	6.0	13.0	11.5	12.5	19.0	16.0	17.5	21.0	19.5	20.0
10	8.5	6.5	7.0	14.5	12.0	13.0	20.0	17.0	18.5	19.5	18.0	18.5
11	---	---	---	14.5	13.5	14.0	21.0	18.0	19.5	19.0	17.5	18.0
12	---	---	---	15.0	14.0	14.5	21.0	19.0	20.0	19.5	17.5	18.5
13	---	---	---	14.5	13.0	13.5	21.5	19.5	20.5	20.0	18.0	19.0
14	---	---	---	15.0	13.0	14.0	21.5	19.5	20.5	20.5	18.5	19.5
15	---	---	---	15.5	14.5	14.5	20.5	19.0	18.0	20.5	19.0	19.5
16	---	---	---	15.5	15.0	14.5	21.0	19.0	20.0	21.5	19.5	20.5
17	---	---	---	14.5	14.0	14.5	21.5	19.0	20.0	22.0	20.5	21.0
18	---	---	---	16.5	14.5	15.0	21.0	19.5	20.5	22.0	21.0	21.5
19	---	---	---	15.0	14.5	15.0	20.5	19.5	20.0	22.5	21.0	21.5
20	---	---	---	15.0	14.5	15.0	21.0	19.5	20.0	22.5	21.5	22.0
21	---	---	---	15.0	15.0	15.0	21.0	20.0	20.0	23.0	22.0	22.5
22	---	---	---	15.0	14.5	15.0	19.5	17.0	18.5	23.0	22.5	22.5
23	---	---	---	15.0	15.0	15.0	18.5	17.5	18.0	22.5	21.5	22.0
24	---	---	---	15.5	15.0	15.5	18.5	17.5	18.0	22.5	21.5	22.0
25	---	---	---	15.5	15.0	15.5	17.5	16.5	17.0	23.0	21.5	22.0
26	---	---	---	16.0	15.5	16.0	16.5	15.5	16.0	23.0	22.0	22.5
27	---	---	---	16.0	15.5	16.0	17.5	15.5	16.5	23.0	22.5	22.5
28	---	---	---	16.0	15.5	16.0	17.5	16.5	17.0	23.0	22.5	22.5
29	---	---	---	17.5	15.5	16.5	18.0	17.0	17.5	23.0	23.0	23.0
30	---	---	---	19.5	17.5	18.5	18.0	17.0	17.5	23.0	23.0	23.0
31	---	---	---	19.0	17.0	18.0	---	---	---	23.5	23.0	23.5
MONTH	---	---	---	---	---	---	21.5	12.5	18.0	23.5	17.5	21.0

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.0	23.5	23.5	27.0	26.0	26.5	---	---	---	25.0	24.0	24.5
2	24.0	23.0	23.5	27.0	25.5	26.0	---	---	---	24.5	24.5	24.5
3	23.5	22.5	23.0	26.5	25.0	25.5	---	---	---	---	---	---
4	23.5	23.0	23.0	25.5	24.5	25.0	---	---	---	---	---	---
5	23.0	23.0	23.0	25.5	24.5	25.0	---	---	---	---	---	---
6	23.0	23.0	23.0	25.5	25.0	25.0	---	---	---	---	---	---
7	23.5	23.0	23.0	26.0	25.5	25.5	---	---	---	---	---	---
8	23.0	22.0	22.5	---	---	---	---	---	---	25.0	24.5	24.5
9	22.5	21.5	22.0	---	---	---	---	---	---	---	---	---
10	22.5	22.0	22.0	---	---	---	---	---	---	---	---	---
11	22.0	22.0	22.0	---	---	---	---	---	---	---	---	---
12	23.0	22.5	22.5	---	---	---	---	---	---	---	---	---
13	23.5	23.0	23.5	---	---	---	25.0	24.5	24.5	---	---	---
14	24.0	23.0	23.5	---	---	---	24.0	22.0	23.5	---	---	---
15	24.0	23.5	23.5	---	---	---	24.0	21.0	22.0	---	---	---
16	24.5	23.5	24.0	---	---	---	25.5	24.0	24.5	---	---	---
17	24.0	23.0	23.5	---	---	---	25.5	20.5	24.5	---	---	---
18	24.0	23.0	23.5	---	---	---	25.0	21.0	24.0	---	---	---
19	24.5	24.0	24.0	---	---	---	24.0	25.5	23.5	---	---	---
20	26.0	24.5	25.0	---	---	---	24.0	25.5	23.0	---	---	---
21	27.0	25.0	26.0	---	---	---	24.0	26.0	23.5	---	---	---
22	27.0	26.0	26.5	---	---	---	23.5	26.5	23.5	---	---	---
23	27.0	25.5	26.0	---	---	---	24.0	27.0	24.0	---	---	---
24	26.5	25.5	26.0	---	---	---	25.5	27.5	24.0	---	---	---
25	26.5	25.5	26.0	---	---	---	24.0	23.0	23.5	---	---	---
26	27.5	25.0	26.5	---	---	---	23.5	23.0	23.5	---	---	---
27	27.0	26.0	26.5	---	---	---	24.0	23.5	24.0	---	---	---
28	27.0	26.0	26.5	---	---	---	25.5	23.5	24.5	---	---	---
29	27.0	26.0	26.5	---	---	---	24.5	23.5	24.0	---	---	---
30	27.0	26.0	26.5	---	---	---	24.0	23.5	23.5	---	---	---
31	---	---	---	---	---	---	24.5	23.5	24.0	---	---	---
MONTH	27.5	21.5	24.0	---	---	---	---	---	---	---	---	---

03430800 COLLINS CREEK AT BELL ROAD, NEAR ANTIOCH, TN

LOCATION.--Lat 36°02'42", long 86°39'34", Davidson County, Hydrologic Unit 05130202, on downstream side of culvert under Bell Road at Interstate 24, 1.4 mi (2.3 km) southeast of Antioch.

DRAINAGE AREA.--3.61 mi^2 (9.35 km^2).

PERIOD OF RECORD.--November 1975 to June 1977 (discontinued). Low to medium-water discharges only.

GAGE.--Water-stage recorder.

REMARKS.--Records poor, no data published above 250 ft^3/s (7.08 m^3/s). Discharge measurements above 200 ft^3/s (5.66 m^3/s) published as miscellaneous measurements in this report. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

DISCHARGE, IN CUBIC FEET PER SECOND, NOVEMBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	8.0	21	4.5	2.3	16	2.0	2.0	.99	.41	3.5
2		---	7.1	15	3.6	1.9	8.8	1.2	84	.85	.32	3.4
3		---	5.4	64	3.2	1.8	6.5	1.1	23	1.2	.26	1.2
4		---	4.5	15	3.0	1.4	5.4	.92	20	6.0	.26	.64
5		---	3.8	9.5	3.8	3.2	4.5	.78	20	1.9	.23	.35
6		---	2.9	7.1	5.2	2.6	3.6	.71	8.3	.92	.35	.26
7		---	2.9	18	4.2	2.0	3.0	1.4	5.4	.57	.44	.18
8		---	2.9	13	3.5	8.5	2.6	.99	4.0	.41	.32	.20
9		---	2.9	8.3	2.8	26	2.2	.85	3.0	1.6	.26	.26
10		---	2.9	6.3	2.4	10	2.0	.92	2.4	1.1	.20	.23
11		---	2.9	7.8	2.4	6.7	3.0	.99	2.2	.41	.18	.18
12		---	2.9	6.5	2.2	6.9	2.9	.95	1.9	.41	.16	.16
13		---	2.9	16	2.3	7.6	1.9	1.8	1.8	.38	.16	.16
14		---	2.9	12	2.3	5.4	1.9	13	1.6	.47	.16	.14
15		---	2.9	8.0	2.2	4.7	1.8	16	1.6	.47	14	.16
16		---	4.0	6.3	2.2	4.3	1.4	6.5	1.9	.64	.26	.18
17		---	4.2	5.2	1.9	3.4	1.2	4.3	1.9	.57	.18	.20
18		1.2	2.8	4.2	42	2.8	1.1	9.5	2.2	.50	.16	.20
19		1.2	2.1	3.6	13	2.3	1.1	4.0	6.3	.50	.12	.20
20		1.2	1.9	3.5	8.0	99	1.1	2.6	2.9	.47	.10	.26
21		1.2	1.8	3.4	9.5	74	29	2.0	1.6	.41	.08	.35
22		1.2	1.5	2.6	8.8	10	3.8	1.6	1.1	.00	.08	.32
23		1.2	1.3	2.3	6.3	6.5	2.1	1.6	.99	.32	.06	.32
24		1.2	1.1	2.4	5.1	5.1	2.2	1.4	.92	.26	.12	.35
25		1.2	69	78	4.3	4.5	16	1.3	1.1	.23	4.3	.38
26		1.2	39	40	3.6	4.0	2.9	1.2	1.2	.23	2.4	.41
27		1.6	12	13	3.4	3.6	1.9	1.5	.99	.35	.41	1.2
28		2.3	8.0	7.8	2.9	3.0	1.5	52	.92	.38	.26	1.6
29		2.0	6.3	6.7	2.6	23	1.3	12	1.2	.29	.18	2.1
30		1.9	8.5	5.4	---	42	1.4	4.2	2.0	.29	.14	2.3
31		---	74	4.9	---	57	---	2.4	---	.41	.16	---
TOTAL		---	295.3	416.8	161.2	435.5	134.1	151.71	208.42	23.53	26.72	21.39
MEAN		---	9.53	13.4	5.56	14.0	4.47	4.89	6.95	.76	.86	.71
MAX		---	74	78	42	99	29	52	84	6.0	14	3.5
MIN		---	1.1	2.3	1.9	1.4	1.1	.71	.92	.00	.06	.14
CFSM		---	2.64	3.71	1.54	3.88	1.24	1.36	1.93	.21	.24	.20
IN.		---	3.04	4.29	1.66	4.49	1.38	1.56	2.15	.24	.28	.22

03430800 COLLINS CREEK AT BELL ROAD, NEAR ANTIOCH, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1976 TO JUNE 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	5.8	2.0	1.3	3.1	7.8	1.9	3.4	1.5			
2	1.4	3.6	1.5	1.3	2.9	5.8	7.8	3.0	1.4			
3	1.3	2.6	1.5	1.3	1.9	99	55	3.6	1.2			
4	1.2	2.0	1.5	1.2	1.5	190	250	3.0	1.3			
5	.78	1.5	1.5	4.5	1.6	24	35	2.6	.23			
6	6.5	1.2	4.0	6.7	1.4	12	13	2.3	.20			
7	3.0	1.1	7.0	6.5	1.4	8.3	9.0	4.3	.16			
8	2.1	.85	5.0	4.9	1.4	6.5	6.9	2.9	.14			
9	10	.78	3.0	6.5	1.2	5.2	5.4	2.4	.12			
10	3.0	.78	2.1	12	1.1	4.3	4.7	2.1	.12			
11	1.5	.92	2.1	11	1.1	6.5	3.8	2.0	.10			
12	1.1	.99	6.5	12	8.8	214	3.4	1.9	.12			
13	.78	.57	4.5	8.0	5.2	26	3.0	2.0	.14			
14	6.4	.44	3.4	45	3.6	12	2.8	2.1	.14			
15	.57	.44	3.2	14	3.2	8.8	2.6	2.1	.12			
16	.57	.44	2.2	10	2.8	6.7	2.3	2.0	.12			
17	.57	.38	1.9	8.0	2.3	5.6	2.2	2.2	.35			
18	.50	.38	1.5	7.0	2.2	5.4	2.2	2.6	.57			
19	.50	.35	1.3	7.0	2.0	4.5	2.1	2.9	.29			
20	1.1	.35	1.4	7.0	1.8	4.2	2.0	3.0	.44			
21	.99	.41	1.2	6.0	1.6	3.6	2.4	3.2	.32			
22	.41	1.2	1.2	6.0	1.5	3.2	47	3.4	.32			
23	.32	1.2	1.1	5.0	1.4	3.0	90	3.5	.78			
24	6.7	1.1	.92	8.0	57	2.9	47	3.5	.92			
25	65	1.0	1.2	7.5	13	2.8	24	3.4	1.8			
26	11	3.0	1.5	6.5	14	2.4	10	3.4	1.8			
27	5.4	2.5	1.2	4.7	36	2.3	7.1	3.0	.78			
28	3.5	8.0	1.2	3.5	11	2.3	5.4	2.8	.47			
29	2.6	5.0	.99	3.2	---	2.2	4.9	2.6	.41			
30	44	3.0	1.1	3.1	---	2.1	4.0	2.3	.38			
31	11	---	1.3	3.1	---	2.0	---	2.0	---			
TOTAL	195.39	51.88	70.01	231.8	186.0	685.4	656.9	85.5	16.74			
MEAN	6.30	1.73	2.26	7.48	6.64	22.1	21.9	2.76	.56			
MAX	65	8.0	7.0	45	57	214	250	4.3	1.8			
MIN	.32	.35	.92	1.2	1.1	2.0	1.9	1.9	.10			
CFSM	1.75	.48	.63	2.07	1.84	6.12	6.07	.77	.16			
IN.	2.01	.53	.72	2.39	1.92	7.06	6.77	.88	.17			

03431517 CUMMINGS BRANCH AT LICKTON, TN

LOCATION.--Lat 36°18'25", long 86°48'00", Davidson County, Hydrologic Unit 05130202, on right downstream wingwall of bridge, on Shaw Road, 900 ft (274 m) above confluence with Shaw Branch, 0.8 mi (1.3 km) northeast of Lickton, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--2.40 mi^2 (6.22 km^2).

PERIOD OF RECORD.--December 1975 to current year.

GAGE.--Water-stage recorder and V-notch wier. Datum of gage is 532.25 ft (162.230 m) above mean sea level.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 224 ft^3/s (6.34 m^3/s) Mar. 12, 1977; gage height, 4.74 ft (1.445 m); minimum daily, 0.05 ft^3/s (0.001 m^3/s) Sept. 1, 2, 5, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 224 ft^3/s (6.34 m^3/s) at 0705 Mar. 12, gage height 4.74 ft, (1.445 m), no other peak above base of 100 ft^3/s (2.83 m^3/s); minimum daily discharge, .05 ft^3/s (0.001 m^3/s) Sept. 1, 2, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	1.6	.45	.29	.55	3.8	.22	1.7	.14	.10	.23	.05
2	.18	1.0	.44	.31	.48	2.8	.22	1.5	.17	.10	.19	.05
3	.16	.70	.40	.34	.55	21	1.2	1.5	.17	.10	.15	.07
4	.14	.59	.37	.32	7.0	49	24	1.5	.15	.10	.13	.07
5	.14	.48	.35	.36	1.0	18	18	1.2	.14	.10	.10	.05
6	.66	.38	.36	.45	.79	10	9.0	1.1	.12	.06	.09	1.0
7	.59	.34	1.5	.48	.59	8.9	8.9	1.0	.11	.08	.09	.62
8	.38	.31	.80	.52	.48	7.8	7.3	1.2	.11	.07	.07	.29
9	.45	.24	.70	.59	.42	5.7	6.0	.96	.09	.09	.07	.20
10	.36	.26	.52	.62	.48	4.4	4.9	.83	.10	.09	1.8	.18
11	.26	.32	.54	.62	.59	4.4	3.8	.79	.10	.09	.75	.17
12	.22	.29	1.4	.52	3.0	45	3.3	.62	.09	.08	.34	.16
13	.20	.29	.92	.48	2.5	22	3.1	.52	.10	.08	.48	.18
14	.19	.32	.74	1.4	1.9	12	2.8	.45	.12	.08	1.9	1.3
15	.18	.32	.66	2.4	1.6	6.0	2.6	.38	.11	.07	1.1	1.6
16	.20	.24	.56	2.2	1.2	3.4	2.3	.34	.14	.07	.52	.79
17	.18	.23	.52	1.8	.96	3.0	1.9	.32	.14	.07	.38	.38
18	.18	.23	.48	1.6	.87	2.1	1.8	.29	.13	.07	.31	.26
19	.18	.24	.48	1.2	.87	2.0	1.7	.26	.15	.07	.22	1.6
20	.31	.26	.44	1.0	.87	1.5	1.4	.24	.18	.08	.19	1.5
21	.29	.24	.42	.96	.70	1.3	1.6	.24	.17	.08	.16	.87
22	.23	.24	.40	.79	.42	.79	1.3	.26	.23	.11	.14	.48
23	.22	.23	.32	.70	6.9	.45	1.5	.27	.22	.10	.13	.34
24	.83	.22	.29	.75	18	.36	3.6	.24	.21	.10	.14	.31
25	1.8	.22	.34	.75	6.4	.29	3.1	.23	.27	.18	.12	.66
26	1.6	.31	.34	.75	4.2	.26	2.6	.22	.22	.17	.10	.79
27	1.0	.45	.26	.96	8.3	.22	2.3	.21	.15	.10	.09	.87
28	.59	.62	.29	1.1	5.2	.20	2.0	.20	.13	.66	.08	.91
29	.52	.55	.32	1.0	---	.22	2.3	.20	.10	1.1	.08	.83
30	2.4	.48	.29	.83	---	.20	2.0	.19	.10	.52	.07	.62
31	2.8	---	.31	.66	---	.20	---	.18	---	.27	.06	---
TOTAL	17.64	12.20	16.21	26.75	76.82	237.29	126.74	19.14	4.36	5.04	10.28	17.20
MEAN	.57	.41	.52	.86	2.74	7.65	4.22	.62	.15	.16	.33	.57
MAX	2.8	1.6	1.5	2.4	18	49	24	1.7	.27	1.1	1.9	1.6
MIN	.14	.22	.26	.29	.42	.20	.22	.18	.09	.06	.06	.05
CFSM	.24	.17	.22	.36	1.14	3.19	1.76	.26	.06	.07	.14	.24
IN.	.27	.19	.25	.41	1.19	3.68	1.96	.30	.07	.08	.16	.27

CAL YR 1976 TOTAL 1162.64 MEAN 3.18 MAX 39 MIN .09 CFSM 1.33 IN 18.01
WTR YR 1977 TOTAL 569.67 MEAN 1.56 MAX 49 MIN .05 CFSM .65 IN 8.83

03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN

LOCATION.--Lat 36°09'04", long 86°51'16", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of Charlotte Avenue bridge on U. S. Highway 70, 3.7 mi (6.0 km) upstream from mouth and 4.0 mi (6.4 km) southwest of the State Capitol in Nashville, and at mile 3.6 (5.8 km).

DRAINAGE AREA.--24.3 mi^2 (62.9 km^2).

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 409.56 ft (124.834 m) above mean sea level.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--13 years, 33.7 ft^3/s (0.954 m^3/s), 18.83 in/yr (478 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,770 ft^3/s (192 m^3/s) Mar. 29, 1975, gage height, 13.34 ft (4.066 m); minimum daily, 0.14 ft^3/s (0.004 m^3/s) Sept. 16, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 23	2205	1540	43.6	6.36	1.939	Mar. 12	0900	*4330	123	10.61	3.234
Mar. 3	2050	1940	54.9	7.11	2.167	Apr. 4	0240	1950	55.2	7.13	2.173

Minimum daily discharge, 0.54 ft^3/s (0.015 m^3/s) June 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	32	9.5	8.1	11	49	11	8.8	1.0	2.4	2.5	2.2
2	4.6	22	9.2	8.1	10	36	49	7.2	1.0	2.1	2.1	1.6
3	3.9	18	8.5	7.8	8.5	382	189	7.2	1.1	1.8	1.8	1.1
4	3.0	14	7.8	7.5	8.1	644	644	7.2	.96	1.7	1.4	1.4
5	2.9	12	7.5	12	8.5	209	234	6.2	.96	1.2	1.3	37
6	90	11	7.5	19	7.5	134	145	5.2	.84	1.1	1.2	4.8
7	20	9.5	22	27	7.2	92	106	27	.90	1.0	11	1.9
8	13	9.2	14	16	7.2	65	80	17	.72	1.0	1.9	1.4
9	49	8.5	11	19	6.7	46	61	8.8	1.1	1.1	1.4	1.4
10	17	7.8	10	23	6.7	34	49	6.4	.72	8.8	1.4	1.2
11	12	7.5	11	20	6.7	58	38	5.5	.54	2.3	.96	1.1
12	8.8	7.2	21	20	41	910	30	4.8	1.4	1.7	1.1	1.0
13	7.2	7.0	15	17	20	236	25	4.3	4.1	1.5	5.5	6.4
14	6.2	6.7	13	120	17	143	20	3.9	2.5	1.4	41	59
15	5.2	6.7	12	65	16	100	17	3.9	2.1	1.3	6.4	29
16	4.8	5.9	11	34	14	61	14	3.4	1.5	1.4	5.2	7.0
17	4.3	5.7	10	45	12	46	12	3.0	1.6	.90	8.8	3.7
18	3.9	5.5	9.5	37	12	36	13	2.4	1.5	1.1	5.2	2.8
19	3.5	5.2	9.2	32	11	28	9.2	2.6	1.8	1.0	3.2	80
20	17	4.8	9.2	27	11	23	7.5	2.4	3.9	.72	2.5	19
21	7.0	4.3	8.1	22	11	20	11	2.5	1.9	.84	2.1	7.2
22	5.7	4.1	7.5	19	11	17	30	2.4	12	1.2	2.0	4.8
23	5.0	3.9	7.8	12	222	15	23	2.3	32	.96	1.4	3.7
24	67	3.9	7.0	12	236	14	59	2.1	9.9	.84	2.6	2.9
25	147	3.9	8.5	11	100	12	43	1.6	27	6.4	2.0	19
26	63	12	8.1	14	82	11	22	1.6	17	2.2	1.6	7.0
27	34	9.2	7.5	15	136	11	14	1.8	5.0	1.6	1.4	14
28	21	16	7.2	18	69	13	13	1.7	3.5	49	1.3	6.2
29	16	12	6.7	16	---	11	18	1.5	2.7	20	1.1	4.6
30	162	9.9	7.0	14	---	11	11	1.2	2.5	7.0	1.2	3.9
31	65	---	7.8	12	---	11	---	1.1	---	3.2	.96	---
TOTAL	874.5	285.4	311.1	729.5	1109.1	3478	1997.7	157.0	143.74	128.76	123.52	336.3
MEAN	28.2	9.51	10.0	23.5	39.6	112	66.6	5.06	4.79	4.15	3.98	11.2
MAX	162	32	22	120	236	910	644	27	32	49	41	80
MIN	2.9	3.9	6.7	7.5	6.7	11	7.5	1.1	.54	.72	.96	1.0
CFSM	1.16	.39	.41	.97	1.63	4.61	2.74	.21	.20	.17	.16	.46
IN.	1.34	.44	.48	1.12	1.70	5.32	3.06	.24	.22	.20	.19	.51

CAL YR 1976 TOTAL 11029.10 MEAN 30.1 MAX 340 MIN 1.0 CFSM 1.24 IN 16.88
WTR YR 1977 TOTAL 9674.62 MEAN 26.5 MAX 910 MIN .54 CFSM 1.09 IN 14.81

03431800 SYCAMORE CREEK NEAR ASHLAND CITY, TN

LOCATION.--Lat 36°19'12", long 87°03'04", Cheatham County, Hydrologic Unit 0510202, near right bank on downstream end of pier of bridge on State Highway 49, at Sycamore, 3.2 mi (5.1 km) north of Ashland City, and 4.4 mi (7.1 km) upstream from Spring Creek, and at mile 8.6 (13.8 km).

DRAINAGE AREA.--97.2 mi^2 (251.7 km^2).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (122 m) (from topographic map).

REMARKS.--Records good. Records of periodic water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--16 years, 138 ft^3/s (3.908 m^3/s), 19.28 in/yr (490 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft^3/s (476 m^3/s) Mar. 12, 1975, gage height, 13.20 ft (4.023 m); minimum, 8.3 ft^3/s (0.24 m^3/s) Oct. 6, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	0515	5440	154	9.14	2.786	Mar. 12	1615	7470	212	10.12	3.085
Mar. 4	0615	*10800	306	11.41	3.478						

Minimum discharge, 13 ft^3/s (0.37 m^3/s) Sept. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	77	38	36	40	233	61	64	27	35	210	14
2	42	59	40	36	40	173	73	57	26	32	70	16
3	38	51	39	36	46	982	143	56	25	26	45	23
4	36	46	38	38	50	6170	1500	62	24	24	36	17
5	36	42	37	47	65	832	801	56	24	22	31	15
6	107	40	37	56	61	444	351	51	24	21	28	97
7	70	39	68	59	61	297	225	278	22	21	323	75
8	40	37	73	58	60	220	172	178	21	20	99	30
9	47	36	55	59	53	180	138	110	22	32	46	23
10	43	36	50	61	45	156	117	82	20	33	39	21
11	36	36	57	61	47	150	103	69	21	26	31	18
12	33	37	91	61	208	3290	91	60	21	29	26	16
13	31	35	92	61	192	782	83	54	23	23	25	25
14	29	35	73	156	128	394	79	50	26	20	71	86
15	29	37	65	280	104	265	74	47	26	19	75	62
16	29	35	57	195	82	194	69	44	24	17	41	39
17	28	34	52	170	70	159	64	41	25	16	36	31
18	27	34	51	130	70	153	60	40	25	30	32	27
19	29	34	46	100	64	126	62	38	40	43	27	180
20	75	33	46	90	58	111	55	36	31	21	24	107
21	67	33	42	80	53	99	54	41	25	24	22	53
22	47	32	39	70	52	94	82	50	25	24	21	38
23	42	31	38	65	294	83	103	37	64	21	20	32
24	92	31	36	60	2290	78	175	35	58	21	20	37
25	144	31	41	55	468	74	174	34	47	42	18	103
26	132	39	46	50	291	71	119	33	85	45	18	117
27	71	61	42	50	581	69	93	32	73	27	17	122
28	53	50	42	50	345	72	78	31	43	53	16	104
29	46	46	40	45	---	76	82	31	34	233	15	66
30	92	39	37	45	---	69	71	31	30	170	15	51
31	121	---	36	40	---	62	---	28	---	188	15	---
TOTAL	1762	1206	1544	2400	5918	16158	5352	1856	981	1358	1512	1645
MEAN	56.8	40.2	49.8	77.4	211	521	178	59.9	32.7	43.8	48.8	54.8
MAX	144	77	92	280	2290	6170	1500	278	85	233	323	180
MIN	27	31	36	36	40	62	54	28	20	16	15	14
CFSM	.58	.41	.51	.80	2.17	5.36	1.83	.62	.34	.45	.50	.56
IN.	.67	.46	.59	.92	2.26	6.18	2.05	.71	.38	.52	.58	.63

CAL YR 1976 TOTAL 60672 MEAN 166 MAX 5090 MIN 24 CFSM 1.71 IN 23.22
WTR YR 1977 TOTAL 41692 MEAN 114 MAX 6170 MIN 14 CFSM 1.17 IN 15.96

03432350 HARPETH RIVER AT FRANKLIN, TN

LOCATION.--Lat 35°55'14", long 86°51'56", Williamson County, Hydrologic Unit 05130204, on left bank 15 ft (5 m) downstream from left downstream end of State Highway 96 bridge, 0.4 mi (0.6 km) southeast of the courthouse in Franklin, and at mile 88.1 (141.8 km).

DRAINAGE AREA.--191 mi^2 (495 km^2), includes 15 mi^2 (39 km^2) without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 604.42 ft (184.227 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft^3/s (572 m^3/s), Mar. 13, 1975, gage height, 33.65 ft (10.257 m); minimum, 1.7 ft^3/s (0.048 m^3/s) Aug. 11, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft^3/s (82.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	unknown	unknown		unknown		Mar. 12	2345	6610	187	21.72	6.620
Mar. 4	1715	*9580	271	25.93	7.903	Apr. 5	unknown	unknown		unknown	

Minimum discharge, 1.9 ft^3/s (0.054 m^3/s) Aug. 28, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	376	85	116	78	641	92	334	18	15	5.0	3.2
2	9.2	273	80	102	74	495	85	228	16	10	4.1	3.5
3	7.9	218	75	94	72	787	400	224	14	8.5	3.6	3.5
4	6.4	183	70	91	68	7770	2000	183	13	6.1	3.3	3.8
5	4.1	154	65	102	66	5060	5400	157	12	4.9	2.9	4.0
6	51	133	62	261	64	3590	3050	127	11	4.1	2.9	4.0
7	35	106	80	330	60	1600	602	309	9.5	3.6	2.9	4.1
8	33	85	127	285	58	960	454	397	8.8	3.2	2.9	4.1
9	80	76	106	256	62	560	363	288	8.5	110	3.1	4.1
10	109	71	97	676	66	378	303	174	7.8	44	8.3	4.1
11	68	66	94	411	62	340	252	143	8.5	20	27	5.6
12	53	66	150	342	250	4090	216	121	20	40	7.2	7.2
13	32	60	218	454	220	5930	193	105	79	30	6.1	71
14	23	58	168	543	160	4300	176	95	55	13	8.3	110
15	18	54	144	804	119	2700	151	86	64	11	88	61
16	14	44	126	456	108	1800	119	78	37	6.4	56	15
17	12	39	111	303	98	1200	103	72	37	5.6	75	14
18	10	34	99	246	92	900	93	68	44	64	161	64
19	9.5	32	89	190	88	700	87	64	33	23	77	45
20	14	28	85	176	82	540	80	60	47	9.2	34	20
21	14	25	84	145	78	420	75	54	24	10	14	11
22	20	22	79	131	74	350	1070	49	18	147	7.8	114
23	20	20	75	118	344	290	1910	46	26	71	6.1	128
24	75	20	69	118	4730	250	1390	43	54	27	5.8	334
25	1600	23	69	141	1180	210	1030	41	59	31	6.1	213
26	1300	28	110	146	720	180	657	37	119	16	4.3	213
27	433	55	109	192	1310	160	478	36	76	8.8	2.8	197
28	274	76	97	164	802	140	366	39	40	8.9	2.2	65
29	210	113	91	120	---	130	313	39	23	7.6	2.2	55
30	664	103	81	101	---	110	259	42	15	6.7	2.8	52
31	723	---	110	86	---	100	---	27	---	5.7	2.8	---
TOTAL	5931.6	2641	3105	7700	11185	46681	21767	3766	997.1	771.3	635.5	1833.2
MEAN	191	88.0	100	248	399	1506	726	121	33.2	24.9	20.5	61.1
MAX	1600	376	218	804	4730	7770	5400	397	119	147	161	334
MIN	4.1	20	62	86	58	100	75	27	7.8	3.2	2.2	3.2
CFSM	1.00	.46	.52	1.30	2.09	7.89	3.80	.63	.17	.13	.11	.32
IN.	1.16	.51	.60	1.50	2.18	9.09	4.24	.73	.19	.15	.12	.36

CAL YR 1976 TOTAL 81913.2 MEAN 224 MAX 3720 MIN 3.2 CFSM 1.17 IN 15.95
WTR YR 1977 TOTAL 107013.7 MEAN 293 MAX 7770 MIN 2.2 CFSM 1.53 IN 20.84

NOTE.--No gage-height record Feb. 1 to Apr. 5.

03433500 HARPETH RIVER AT BELLEVUE, TN

LOCATION.--Lat 36°03'16", long 86°55'42", Davidson County, Hydrologic Unit 05130204, on right bank 45 ft (14 m) upstream from bridge on State Highway 100, 0.1 mi (0.2 km) downstream from Little Harpeth River, 0.9 mi (1.4 km) southeast of Bellevue, and at mile 62.1 (99.9 km).

DRAINAGE AREA.--408 mi^2 (1,057 km^2), includes 15 mi^2 (39 km^2) without surface drainage.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only November 1929 to December 1931, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1920-30, 1932-35. WSP 1386: 1948. WSP 1556: Drainage area. WSP 1910: 1960.

GAGE.--Water-stage recorder. Datum of gage is 541.04 ft (164.909 m) above mean sea level (levels of Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, nonrecording gage at site 2.8 mi (4.5 km) downstream at datum 7.85 ft (2.393 m) lower.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--57 years, 570 ft^3/s (16.14 m^3/s), 18.97 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft^3/s (1,130 m^3/s) Feb. 13, 1948, gage height, 24.34 ft (7.419 m) from floodmark; no flow Oct. 5-10, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 7,500 ft^3/s (212 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	1930	10600	300	14.93	4.551	Mar. 13	unknown	14700	416	a17.56	5.352
Mar. 4	2315	*16900	479	18.61	5.672	Apr. 4	unknown	9500	269	a14.04	4.279

a From high-water marks.

Minimum discharge, 28 ft^3/s (0.79 m^3/s) Oct. 5, June 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	1030	227	215	207	1410	250	533	69	85	63	47
2	49	753	207	251	191	1110	600	484	61	83	61	47
3	40	602	192	196	188	1750	1500	407	57	70	61	47
4	35	501	179	202	184	13800	8000	383	52	67	61	49
5	31	426	168	205	183	13700	7000	332	47	65	60	47
6	138	368	159	388	173	3020	3000	292	42	64	59	47
7	196	320	218	612	158	1960	1700	580	38	63	59	49
8	119	266	312	615	148	1510	1200	1020	32	63	59	49
9	147	233	304	553	146	1240	940	610	30	92	57	49
10	209	213	266	995	143	1050	780	442	28	177	57	50
11	175	194	249	964	141	1800	620	357	28	78	57	50
12	132	185	317	826	247	7000	558	305	28	64	57	50
13	106	174	478	542	430	11000	492	268	32	65	57	50
14	87	164	432	1030	371	5000	443	239	318	64	57	61
15	75	158	383	1860	311	1800	399	212	106	62	57	158
16	66	148	341	1110	270	1300	345	186	102	61	97	144
17	61	135	302	800	240	1100	300	163	73	106	94	106
18	56	126	268	570	226	940	274	150	135	101	141	64
19	53	120	240	480	216	800	255	138	105	82	149	58
20	57	115	228	430	203	680	238	125	193	66	79	58
21	67	110	212	390	189	580	219	117	132	63	50	80
22	70	104	197	370	180	520	747	105	87	63	45	68
23	64	98	181	338	519	460	2230	98	109	194	45	56
24	196	94	175	308	8480	410	2430	94	107	95	45	54
25	3880	92	169	331	4120	370	1750	93	116	71	47	263
26	3110	101	191	362	1780	340	1200	90	296	67	47	971
27	1210	155	240	424	2680	320	874	86	302	64	45	401
28	775	212	214	396	1980	300	686	83	192	63	47	324
29	592	267	199	315	---	270	602	82	129	64	47	235
30	1340	278	182	227	---	260	512	152	99	131	47	167
31	1860	---	184	213	---	240	---	88	---	65	47	---
TOTAL	15052	7742	7614	16518	24304	76040	40144	8314	3145	2518	1954	3899
MEAN	486	258	246	533	868	2453	1338	268	105	81.2	63.0	130
MAX	3880	1030	478	1860	8480	13800	8000	1020	318	194	149	971
MIN	31	92	159	196	141	240	219	82	28	61	45	47
CFSM	1.19	.63	.60	1.31	2.13	6.01	3.28	.66	.26	.20	.15	.32
IN.	1.37	.71	.69	1.51	2.22	6.93	3.66	.76	.29	.23	.18	.36

CAL YR 1976 TOTAL 185409 MEAN 507 MAX 5650 MIN 22 CFSM 1.24 IN 16.90
WTR YR 1977 TOTAL 207244 MEAN 568 MAX 13800 MIN 28 CFSM 1.39 IN 18.90

NOTE.--No gage-height record Mar. 11 to Apr. 11.

03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN

LOCATION.--Lat 36°07'19", long 87°05'56", Cheatham County, Hydrologic Unit 05130204, on right bank 400 ft (122 m) upstream from bridge on U. S. Highway 70, 1.7 mi (2.7 km) northeast of Kingston Springs, 3.0 mi (4.8 km) downstream from Turnbull Creek, and at mile 32.4 (52.1 km).

DRAINAGE AREA.--681 mi^2 (1,764 km^2), includes 15 mi^2 (39 km^2) without surface drainage.

PERIOD OF RECORD.--October 1924 to current year. Prior to July 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1927, 1933, 1935-36. WSP 1033: 1927(M), 1932-33(M), 1935(M), 1937(M). WSP 1706: 1945(P). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 448.04 ft (136.563 m) above mean sea level. July 8, 1925, to Jan. 22, 1939, nonrecording gage at site 150 ft (46 m) downstream at same datum.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--53 years, 962 ft^3/s (27.24 m^3/s), 19.19 in/yr (487 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,000 ft^3/s (1,700 m^3/s) Jan. 7, 1946, gage height, 32.20 ft (9.815 m) from high-water mark in gage house; minimum, 12 ft^3/s (0.34 m^3/s) Sept. 18, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Jan. 7, 1946. Flood of March 1902 reached a stage about 3 ft (0.91 m) lower than that of Jan. 7, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft^3/s (283 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	0745	12,100	343	14.79	4.508	Mar. 12	1830	16,400	464	18.27	5.569
Mar. 4	1115	*26,600	753	23.47	7.154	Apr. 5	0030	15,800	447	17.83	5.435

Minimum discharge 58 ft^3/s (1.64 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	1720	435	259	389	2620	422	849	177	190	146	68
2	143	1160	404	297	377	2060	463	780	161	177	125	65
3	130	929	377	374	383	2740	1300	602	148	163	107	63
4	118	780	356	389	380	20900	12500	631	139	146	99	63
5	109	677	334	398	380	15600	11800	538	134	134	93	66
6	210	597	312	502	349	7900	5330	463	136	130	88	78
7	389	522	383	830	312	3430	3080	648	128	122	85	76
8	312	458	487	902	287	2560	2280	1900	120	114	87	70
9	274	404	512	869	290	1990	1770	1180	118	106	81	69
10	319	383	473	1040	301	1640	1460	792	109	182	77	70
11	341	359	435	1360	297	1470	1230	597	106	226	76	63
12	268	345	502	1030	625	9730	1050	487	106	150	74	59
13	218	330	660	902	824	13000	909	422	178	136	84	64
14	187	312	708	1220	780	7790	811	386	362	127	237	190
15	163	304	636	3110	671	3300	726	356	297	122	197	345
16	148	290	575	2010	580	2490	636	323	195	114	136	280
17	139	274	517	1310	512	1930	543	301	190	99	197	237
18	130	256	463	1070	477	1670	482	280	180	122	200	177
19	125	248	419	909	449	1430	444	262	228	148	239	200
20	190	239	404	811	429	1220	413	242	242	139	207	245
21	210	228	386	744	404	1070	395	231	290	122	154	166
22	170	220	349	660	389	942	429	228	212	110	166	163
23	159	212	345	580	902	824	2230	215	248	173	159	145
24	419	210	323	538	10300	738	3220	202	262	234	123	132
25	2950	202	326	543	7840	671	2670	200	262	251	106	799
26	5160	228	345	575	3390	614	1860	207	468	185	99	1480
27	2290	374	365	677	4220	564	1310	192	502	161	88	882
28	1200	404	389	708	3810	543	1010	182	374	143	83	559
29	902	512	359	564	---	527	889	177	262	173	79	422
30	1320	468	330	487	---	477	811	197	215	392	76	334
31	3030	---	334	432	---	444	---	228	---	223	72	---
TOTAL	21875	13645	13243	26100	40347	112884	62473	14298	6549	5014	3840	7630
MEAN	706	455	427	842	1441	3641	2082	461	218	162	124	254
MAX	5160	1720	708	3110	10300	20900	12500	1900	502	392	239	1480
MIN	109	202	312	259	287	444	395	177	106	99	72	59
CFSM	1.04	.67	.63	1.24	2.12	5.35	3.06	.68	.32	.24	.18	.37
IN.	1.19	.75	.72	1.43	2.20	6.17	3.41	.78	.36	.27	.21	.42

CAL YR 1976 TOTAL 338289 MEAN 924 MAX 9780 MIN 95 CFSM 1.36 IN 18.48
WTR YR 1977 TOTAL 327898 MEAN 898 MAX 20900 MIN 59 CFSM 1.32 IN 17.91

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN

LOCATION.--Lat 36°19'26", long 87°13'32", Cheatham County, Hydrologic Unit 05130205, on downstream end of lower lock wall at Cheatham Dam, 2.0 mi (3.2 km) southwest of Neptune, 3.0 mi (4.8 km) upstream from Half Pone Creek, 9.7 mi (15.6 km) west of Ashland City, and at mile 148.4 (238.8 km).

DRAINAGE AREA.--14,163 mi^2 (36,682 km^2).

PERIOD OF RECORD.--October 1954 to current year.

REVISED RECORDS.--WSP 1726: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.00 ft (106.680 m) above mean sea level. Prior to May 5, 1966, at mean sea level datum. Auxiliary water-stage recorder 15.3 mi (24.6 km) downstream from base gage at same datum. Prior to June 3, 1966, auxiliary water-stage recorder and nonrecording gage on upper lock wall at former dam B, at site 8.1 mi (13.0 km) downstream from base gage at datum 1.76 ft (0.536 m) lower.

REMARKS.--Records fair. Flow regulated by eight lakes or reservoirs above station (see p. 144).

AVERAGE DISCHARGE.--23 years 23,550 ft ^{3}/s (666.9 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204,000 ft^3/s (5,780 m^3/s) Mar. 15, 1975; maximum gage height, 48.39 ft (14.749 m) Mar. 1, 1962; minimum daily discharge, 700 ft^3/s (19.8 m^3/s) Oct. 29, 1969; minimum gage height, 1.55 ft (0.472 m) Nov. 26, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 53.5 ft (16.31 m); Jan. 25, 1937, from profile by Corps of Engineers, discharge, about 200,000 ft^3/s (5,660 m^3/s) on Jan. 24, 1937. Flood of Jan. 1, 1927, reached a stage of 51.7 ft (15.76 m), from profile, discharge about 205,000 ft^3/s (5,810 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 110,000 ft^3/s (3,120 m^3/s) Apr. 5; maximum gage height, 32.42 ft (9.882 m); minimum daily, 1,400 ft^3/s (39.65 m^3/s) June 12; minimum gage height, 4.00 ft (1.219 m) June 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4700	20000	18400	11100	9500	17000	10000	28000	12300	12700	6200	13000
2	6510	25000	21600	16800	10400	17500	10300	26300	10100	13200	6800	10000
3	4220	22200	12700	18300	11000	12700	11900	29400	7400	6840	5500	8000
4	4950	22000	5300	18800	11500	92000	61400	28400	3600	5300	2700	5800
5	6670	18000	5000	14900	9600	93000	102000	24400	3600	4610	4200	3500
6	10100	6000	3600	20600	8500	55000	101000	21900	7300	11700	4400	7200
7	13000	6000	4000	24200	10100	30000	78500	36000	13200	21300	2600	10300
8	14600	10000	7300	22000	10800	24000	65700	49000	9500	21200	3000	12800
9	7480	12700	18800	19100	13700	13000	65300	23500	7600	14500	3100	13300
10	4790	12300	23400	22200	8200	17000	65600	22400	5200	3800	5800	11000
11	6680	14100	27300	32200	7000	22000	58700	23600	2700	8300	6000	8800
12	7880	12200	24300	29900	7200	54000	52700	23500	1400	13300	7500	8700
13	14800	17200	10100	38100	6000	96000	49800	23300	9100	13400	8000	8500
14	18500	12000	21000	31900	12800	97000	48400	24200	13800	12200	4700	15800
15	13600	11500	24800	18500	13500	50300	43500	19000	7200	16100	12000	7620
16	6520	11300	24300	22300	13400	36000	38300	13000	3000	16100	16200	10900
17	6400	12500	12300	25400	13500	28100	41700	21900	3000	9700	17800	11600
18	8490	13100	6600	27500	13500	23300	37800	26600	3500	10000	17700	15200
19	8250	12200	5300	42400	14200	25100	40600	21600	3500	12300	17600	11900
20	9950	5600	8000	34500	5500	29100	42300	24300	4000	3200	6700	8360
21	5970	2920	13700	30200	8200	25700	45700	23700	8800	11100	5700	15400
22	4460	3510	18600	16200	8600	23900	42200	14500	12000	9700	4400	12700
23	3960	13100	10300	18600	9200	18700	44600	8500	9140	6600	7200	13800
24	3990	18500	11600	15600	53000	22200	50700	11500	17900	5000	10900	1740
25	10400	12700	6800	17000	42000	24100	35500	13600	6300	4100	11000	3690
26	15800	12300	3800	8960	36000	26400	34000	8500	14600	10300	11000	10800
27	24800	2680	4000	17900	21000	19500	31300	8400	8600	12200	11200	21100
28	18200	6130	3900	20300	19600	20400	35100	7900	16400	7300	8000	22000
29	14600	4040	3200	13900	---	13000	34200	5300	13700	5200	8900	14800
30	19200	15500	4700	21200	---	11000	33000	4000	11600	3400	13000	14100
31	17200	---	11600	21600	---	14700	---	11000	---	4300	13700	---
TOTAL	316670	367280	376300	692160	407500	1051700	1411800	627200	250040	308950	263500	332410
MEAN	10220	12240	12140	22330	14550	33930	47060	20230	8335	9966	8500	11080
MAX	24800	25000	27300	42400	53000	97000	102000	49000	17900	21300	17800	22000
MIN	3960	2680	3200	8960	5500	11000	10000	4000	1400	3200	2600	1740

CAL YR 1976 TOTAL 7506350 MEAN 20510 MAX 92200 MIN 2110
WTR YR 1977 TOTAL 6405510 MEAN 17550 MAX 102000 MIN 1400

NOTE.--No gage-height record July 26 to Sept. 14.

03435637 SULPHUR FORK RED RIVER NEAR GREENBRIER, TN

LOCATION.--Lat 36°29'05", long 86°47'37", Robertson County, Hydrologic Unit 05130206, at bridge on State Highway 76, 0.8 mi (1.3 km) upstream from Santee Creek, 3.3 mi (5.3 km) north of Greenbrier, 5.2 mi (8.4 km) east of courthouse in Springfield, and at mile 38.0 (61.2 km).

DRAINAGE AREA.--34.9 mi^2 (90.4 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE.--October 1975 to September 1977 (discontinued).

INSTRUMENTATION.--Water temperature recorder since October 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.5°C July 16, 17, 1977; minimum, 0.0°C many days winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.5°C July 16, 17; minimum, 0.0°C many days during winter months.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	15.5	17.0	10.5	8.0	9.5	3.5	0.5	2.5	0.5	0.0	0.0
2	19.5	15.5	17.5	10.5	7.0	8.5	4.0	2.0	2.5	0.5	0.0	0.0
3	19.5	15.5	17.5	11.5	9.0	10.0	3.5	0.5	2.5	0.5	0.0	0.5
4	20.0	16.0	18.0	9.0	7.0	8.0	4.0	1.5	3.0	1.0	0.5	0.5
5	20.5	17.5	19.0	8.0	5.0	6.5	4.5	1.5	3.0	1.0	0.5	1.0
6	19.5	15.5	17.0	8.5	4.5	6.5	5.0	2.0	3.5	0.5	0.5	0.5
7	16.0	15.0	15.5	9.0	6.0	7.5	5.0	3.0	4.0	1.5	0.0	0.5
8	14.5	14.0	14.5	7.0	4.5	6.0	3.0	1.0	2.0	1.0	0.0	0.0
9	15.0	13.0	14.0	8.5	5.0	7.0	3.0	0.0	1.5	0.5	0.0	0.5
10	15.5	12.0	14.0	10.0	7.5	8.5	5.0	2.0	3.5	0.5	0.0	0.0
11	15.5	12.0	14.0	7.5	5.5	6.5	7.0	5.0	6.0	0.0	0.0	0.0
12	16.0	12.5	14.5	6.5	4.0	5.0	7.5	6.0	7.0	0.5	0.0	0.0
13	17.5	14.0	15.5	5.0	2.5	4.0	6.0	3.5	5.0	0.5	0.0	0.0
14	16.0	13.5	15.0	4.5	4.0	4.5	5.0	2.0	3.5	0.5	0.0	0.0
15	16.5	13.0	15.0	6.0	4.5	5.0	6.5	4.0	5.5	2.5	0.5	1.5
16	15.5	13.5	14.5	6.5	3.5	5.0	6.0	3.5	4.5	2.5	0.0	1.0
17	14.0	12.0	13.0	7.0	4.0	5.5	6.0	3.0	4.5	0.0	0.0	0.0
18	13.5	10.5	12.0	8.0	4.5	6.5	6.5	3.5	5.0	0.0	0.0	0.0
19	13.0	11.0	12.0	9.0	6.5	8.0	7.5	4.5	6.0	0.5	0.0	0.0
20	12.5	10.5	11.5	8.5	6.5	7.5	7.5	3.0	6.0	0.5	0.0	0.0
21	12.0	9.0	10.5	7.5	5.5	6.5	2.5	0.0	1.5	0.5	0.0	0.5
22	12.0	8.5	10.5	6.5	3.5	5.0	1.5	0.0	0.5	1.0	0.0	0.5
23	11.5	9.5	10.5	5.0	2.0	4.0	2.5	0.0	1.0	0.5	0.0	0.0
24	12.5	11.5	12.0	7.0	4.5	5.5	2.0	0.0	0.5	0.5	0.0	0.5
25	13.0	12.5	13.0	8.0	4.5	6.5	2.0	0.5	1.5	1.5	0.0	1.0
26	12.0	10.5	11.5	9.5	8.0	8.5	3.0	0.5	2.0	2.5	0.0	1.5
27	10.5	8.5	9.5	10.0	8.5	9.5	4.0	0.5	2.5	3.5	0.5	2.0
28	10.0	7.0	8.5	8.5	3.0	6.0	4.5	2.0	3.5	1.5	0.0	1.0
29	9.5	6.0	8.5	3.5	1.0	2.5	2.0	0.0	1.5	0.5	0.0	0.0
30	10.0	9.0	9.5	2.5	0.0	1.5	2.5	0.0	1.0	1.0	0.0	0.5
31	10.5	9.5	10.0	---	---	---	0.5	0.0	0.0	1.0	0.0	0.5
MONTH	20.5	6.0	13.5	11.5	0.0	6.5	7.5	0.0	3.0	3.5	0.0	0.5

03435637 SULPHUR FORK RED RIVER NEAR GREENBRIER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.5	0.0	0.5	8.5	6.5	7.0	14.5	11.5	13.5	19.5	15.0	17.0
2	1.5	0.0	0.5	8.0	4.5	7.0	16.0	13.5	15.0	19.5	16.0	17.5
3	1.5	0.5	1.0	8.5	8.0	8.0	15.0	12.5	13.5	19.5	17.0	18.0
4	3.5	0.0	1.5	12.0	8.5	10.0	13.5	12.0	13.0	20.5	17.0	18.5
5	3.0	0.5	1.5	11.5	8.0	10.0	12.0	9.5	11.0	22.5	18.0	20.0
6	1.5	0.0	1.0	11.5	8.5	10.0	13.0	8.5	11.0	22.0	18.5	20.5
7	1.5	0.0	0.5	10.5	6.5	9.0	15.5	9.5	12.5	20.0	18.0	19.0
8	1.5	0.0	1.0	11.5	7.0	9.5	15.0	11.5	13.5	20.0	16.5	18.0
9	3.0	0.0	1.5	11.0	8.0	10.0	15.0	10.5	13.0	18.0	14.5	16.5
10	4.5	0.0	2.5	13.0	9.0	11.0	18.0	12.0	14.5	17.0	13.0	14.5
11	5.5	1.0	3.5	13.0	11.0	12.0	19.5	14.0	16.5	17.5	12.5	14.5
12	5.5	3.0	4.5	14.0	11.5	13.0	19.0	14.5	17.0	18.5	13.0	15.5
13	6.5	3.5	5.0	14.0	10.5	12.0	20.0	15.0	17.0	19.5	13.5	16.5
14	6.0	3.5	4.5	14.5	9.5	12.0	20.0	15.0	17.5	19.5	14.5	17.0
15	4.0	2.0	3.0	15.0	10.5	13.0	20.5	15.0	18.0	21.0	15.0	18.0
16	4.0	0.5	2.0	14.0	11.5	12.5	21.0	15.5	18.0	21.5	16.5	19.0
17	4.0	0.0	2.0	11.5	9.5	10.5	21.0	15.5	18.5	22.5	17.5	20.0
18	7.0	2.5	4.5	15.5	11.0	13.0	20.0	16.5	18.5	22.5	18.0	20.5
19	6.0	4.0	5.0	12.5	10.5	11.5	20.0	16.5	18.0	23.0	18.5	21.0
20	5.0	2.5	4.0	13.5	9.5	11.5	21.0	16.5	20.0	23.0	18.5	21.0
21	6.0	1.5	4.0	12.5	10.0	11.0	19.0	17.5	18.5	23.5	19.5	21.5
22	9.5	3.5	6.5	12.0	9.0	10.5	18.0	17.0	17.5	22.0	20.0	21.0
23	10.0	7.5	8.5	12.5	7.0	9.5	19.0	16.0	17.5	22.0	19.0	20.5
24	11.0	7.5	9.0	13.0	8.0	10.5	18.0	15.0	16.0	22.5	19.0	21.0
25	11.5	8.0	9.5	14.0	8.0	11.0	15.5	13.5	14.5	22.5	20.0	21.0
26	13.0	8.0	10.5	14.0	9.0	12.0	15.0	12.0	13.5	23.0	19.5	21.5
27	12.0	7.5	9.0	14.5	11.5	13.0	17.0	12.0	14.5	24.0	19.0	21.5
28	9.5	6.0	8.0	16.5	13.5	14.5	16.0	14.0	15.0	23.5	20.5	22.0
29	---	---	---	17.0	13.0	15.0	15.5	14.0	14.5	24.0	20.5	22.5
30	---	---	---	20.0	15.0	17.0	17.0	13.0	15.0	25.0	21.0	23.0
31	---	---	---	17.0	13.5	15.0	---	---	---	25.5	22.0	23.5
MONTH	13.0	0.0	4.0	20.0	4.5	11.5	21.0	8.5	15.5	25.5	12.5	19.5

	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	21.0	22.5	25.0	23.0	24.0	25.0	22.0	23.5	28.0	25.0	26.5
2	24.0	20.5	22.0	26.0	21.5	24.0	25.0	21.0	23.0	28.0	24.5	26.0
3	23.5	19.5	22.0	26.0	22.0	24.0	25.5	21.0	23.5	27.5	24.0	25.5
4	24.0	19.5	22.0	27.0	22.0	25.0	25.5	22.5	24.0	28.0	24.0	26.0
5	24.5	20.0	22.5	27.5	23.5	25.5	27.0	23.0	25.0	28.0	24.0	26.0
6	25.0	21.0	23.0	28.0	23.5	26.0	28.0	24.0	26.0	26.0	25.0	25.0
7	20.5	19.5	20.0	29.0	24.0	26.5	28.0	24.5	26.0	26.5	23.5	24.5
8	21.0	17.5	19.5	29.0	25.0	27.0	28.0	23.5	26.0	26.0	23.5	25.0
9	22.5	19.0	20.5	27.0	22.5	24.0	28.0	24.5	26.0	26.0	22.5	24.5
10	21.5	18.0	19.5	26.0	22.0	24.0	27.5	24.5	25.5	25.5	23.0	24.5
11	23.5	18.5	21.5	25.5	22.5	24.0	28.0	24.0	26.0	24.5	20.0	22.0
12	24.5	20.5	22.5	27.0	23.0	25.0	27.5	24.5	26.0	24.0	20.5	22.0
13	25.0	22.0	23.5	28.5	23.5	26.0	27.0	24.5	25.5	24.5	21.5	22.5
14	23.0	21.5	22.5	29.0	24.5	27.0	25.0	23.5	24.0	22.5	21.5	22.0
15	24.0	21.0	22.5	29.0	25.0	27.0	26.5	23.0	24.5	24.5	21.0	22.5
16	24.5	21.0	23.0	29.5	24.5	27.0	27.0	23.5	25.0	23.5	22.0	22.5
17	23.0	22.0	22.5	29.5	25.0	27.0	25.0	23.5	24.5	24.5	21.0	22.5
18	25.5	21.5	23.5	29.0	25.0	27.0	25.0	22.0	23.5	25.0	21.0	23.0
19	25.5	22.5	24.0	29.0	24.5	26.5	24.5	21.0	23.0	23.5	20.0	22.0
20	25.0	22.5	23.5	28.0	25.0	26.5	25.5	21.5	23.5	22.5	19.5	21.0
21	26.0	22.5	24.0	28.5	25.0	27.0	25.5	21.5	23.5	22.0	17.5	20.0
22	25.5	22.5	23.5	26.5	24.0	25.0	26.5	23.0	24.0	22.5	18.0	20.0
23	26.0	22.5	24.0	27.0	23.0	25.0	26.5	22.0	24.5	22.5	18.5	20.5
24	26.5	22.5	24.0	26.5	24.0	25.0	26.5	24.0	25.0	21.5	20.0	20.5
25	24.5	22.5	23.5	26.5	24.0	25.0	26.0	23.0	24.5	20.0	19.0	19.5
26	24.5	21.5	23.0	26.5	23.5	25.0	27.0	23.5	25.0	23.5	19.0	20.5
27	25.0	21.0	23.0	25.5	22.5	24.0	27.0	24.0	25.5	22.0	19.5	20.5
28	26.5	22.0	24.5	24.5	23.0	23.5	27.5	24.0	25.5	21.0	18.0	19.5
29	26.0	23.0	24.5	25.0	22.0	23.5	26.5	24.0	25.5	19.0	17.5	18.0
30	27.5	23.0	25.5	25.5	21.5	23.5	28.0	24.0	26.0	20.0	17.5	18.5
31	---	---	---	26.0	22.0	24.0	28.5	24.5	26.5	---	---	---
MONTH	27.5	17.5	22.5	29.5	21.5	25.5	28.5	21.0	25.0	28.0	17.5	22.5
YEAR	29.5	0.0	14.0									

03435700 SULPHUR FORK RED RIVER ABOVE BEAVER DAM CREEK NEAR SPRINGFIELD, TN

LOCATION.--Lat 36°30'53", long 86°50'46", Robertson County, Hydrologic Unit 05130206, on left bank at ford on private road, 1.0 mi (1.6 km) upstream from the mouth of Beaver Dam Creek, 2.4 mi (3.9 km) northeast of Springfield, and at mile 32.9 (52.9 km).

DRAINAGE AREA.--49.1 mi^2 (127.2 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: August 1975 to September 1977 (discontinued).

INSTRUMENTATION.--Water temperature recorder since August 1975.

REMARKS.--No record Mar. 12-28, May 8-19.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 27.5°C July 8; minimum, 0.0°C many days during winter months.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.0	16.0	16.5	10.5	9.0	9.5	2.5	1.5	2.0	0.5	0.0	0.5
2	17.0	15.5	16.5	10.0	8.5	9.0	3.0	2.5	3.0	0.5	0.0	0.5
3	17.0	15.5	16.5	10.5	9.5	10.0	3.0	2.5	2.5	0.5	0.5	0.5
4	18.0	16.0	17.0	10.5	8.0	8.5	3.0	3.0	3.0	0.5	0.0	0.5
5	19.0	17.5	18.0	8.0	6.5	7.0	3.0	3.0	3.0	0.5	0.0	0.5
6	19.0	16.5	17.5	7.5	6.0	6.5	4.0	3.0	3.5	0.5	0.0	0.0
7	16.5	15.0	15.5	7.5	7.0	7.5	4.5	4.0	4.5	0.5	0.0	0.0
8	15.0	14.0	14.5	7.5	6.0	6.5	4.0	2.5	3.0	0.5	0.0	0.0
9	14.0	13.5	14.0	8.0	5.5	7.0	2.5	1.5	2.0	0.0	0.0	0.0
10	13.5	13.0	13.5	9.0	8.0	8.5	5.0	2.5	3.5	0.0	0.0	0.0
11	13.5	13.0	13.5	9.0	6.5	7.5	7.0	5.0	6.0	0.0	0.0	0.0
12	14.0	13.0	13.5	6.5	5.0	5.5	7.5	7.0	7.5	0.0	0.0	0.0
13	15.0	14.0	14.5	5.0	4.0	4.5	7.0	5.5	6.0	0.0	0.0	0.0
14	15.0	14.0	14.5	4.5	4.0	4.5	5.0	3.5	4.5	0.0	0.0	0.0
15	15.0	13.5	14.0	5.5	4.5	5.0	6.5	5.0	5.5	0.0	0.0	0.0
16	15.0	13.5	14.5	5.5	4.5	5.0	6.0	5.0	5.5	0.5	0.0	0.0
17	13.5	12.0	12.5	6.0	5.0	5.5	5.5	4.5	5.0	0.0	0.0	0.0
18	11.5	10.5	11.0	7.0	6.0	6.5	6.0	5.0	5.5	0.0	0.0	0.0
19	12.0	10.5	11.0	8.5	7.0	8.0	7.5	5.5	6.5	0.0	0.0	0.0
20	12.0	11.0	11.5	9.0	8.0	8.5	8.0	5.5	7.5	0.0	0.0	0.0
21	11.0	10.0	10.5	8.0	6.5	7.0	5.0	1.5	3.0	0.0	0.0	0.0
22	10.0	9.5	10.0	6.0	4.5	5.5	1.5	1.0	1.0	0.0	0.0	0.0
23	11.0	9.5	10.5	4.5	4.0	4.0	1.5	1.0	1.0	0.0	0.0	0.0
24	13.0	11.0	12.0	5.0	4.0	5.0	1.5	1.0	1.0	0.0	0.0	0.0
25	13.5	13.0	13.5	7.0	5.0	6.0	2.0	1.0	1.5	0.0	0.0	0.0
26	13.0	11.5	12.5	9.5	7.0	8.5	2.5	1.5	2.0	0.0	0.0	0.0
27	11.5	10.0	10.5	11.0	10.0	10.5	3.5	2.0	2.5	1.0	0.0	0.5
28	9.5	8.0	8.5	10.0	5.5	8.0	4.0	3.5	3.5	1.0	0.0	0.5
29	9.0	7.5	8.0	5.0	2.5	3.5	3.5	1.5	2.5	0.0	0.0	0.0
30	10.0	9.0	9.5	2.5	2.0	2.0	1.5	1.0	1.0	0.0	0.0	0.0
31	10.5	10.0	10.0	---	---	---	1.0	0.5	0.5	0.0	0.0	0.0
MONTH	19.0	7.5	13.0	11.0	2.0	6.5	8.0	0.5	3.5	1.0	0.0	0.0

03435700 SULPHUR FORK RED RIVER ABOVE BEAVER DAM CREEK NEAR SPRINGFIELD, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	8.5	7.0	8.0	14.5	13.5	14.0	16.0	14.0	15.0
2	0.0	0.0	0.0	8.5	6.0	7.5	16.0	14.5	15.0	16.5	15.5	16.0
3	0.0	0.0	0.0	9.0	8.5	9.0	15.0	13.5	14.0	16.5	15.5	16.0
4	1.0	0.0	0.5	12.0	9.0	10.5	14.0	13.0	13.5	17.0	16.0	16.5
5	1.0	0.5	1.0	12.0	9.0	10.5	13.5	11.0	12.0	18.5	16.0	17.0
6	0.0	0.0	0.0	11.5	9.5	10.5	13.0	10.0	11.5	18.0	17.0	17.5
7	0.0	0.0	0.0	11.0	8.0	9.5	15.5	11.0	13.0	17.5	16.5	17.0
8	0.0	0.0	0.0	12.0	8.5	10.0	15.5	13.0	14.0	---	---	---
9	0.5	0.0	0.0	11.5	9.5	10.5	15.0	12.0	13.5	---	---	---
10	2.0	0.0	1.0	13.0	10.0	11.5	17.0	12.5	15.0	---	---	---
11	4.5	1.5	3.0	13.0	12.0	12.5	18.5	15.0	17.0	---	---	---
12	5.5	4.0	4.5	---	---	---	18.5	15.5	17.5	---	---	---
13	6.0	4.0	5.5	---	---	---	19.0	16.0	17.5	---	---	---
14	5.5	4.0	5.0	---	---	---	18.5	16.5	18.0	---	---	---
15	5.0	3.0	3.5	---	---	---	19.0	16.5	18.0	---	---	---
16	3.5	1.5	2.5	---	---	---	19.5	17.0	18.5	---	---	---
17	3.5	1.0	2.5	---	---	---	19.5	17.5	18.5	---	---	---
18	6.5	3.5	4.5	---	---	---	19.0	18.0	18.5	---	---	---
19	6.0	5.0	5.5	---	---	---	19.0	18.0	18.5	---	---	---
20	5.0	4.0	4.5	---	---	---	19.0	18.0	18.5	21.5	20.0	21.0
21	5.0	3.0	4.0	---	---	---	18.5	17.5	18.0	22.0	20.5	21.5
22	8.5	4.5	6.0	---	---	---	17.5	17.0	17.0	21.5	21.0	21.5
23	9.5	8.0	9.0	---	---	---	17.5	16.5	17.0	21.5	20.0	20.5
24	11.0	7.5	9.5	---	---	---	16.5	15.0	15.5	21.5	20.0	21.0
25	11.0	8.5	10.0	---	---	---	15.5	13.5	14.0	21.5	20.5	21.0
26	12.5	9.0	11.0	---	---	---	13.5	12.0	13.0	22.0	20.5	21.0
27	12.5	8.5	10.0	---	---	---	15.0	12.0	13.5	22.0	20.0	21.0
28	9.5	7.0	8.0	---	---	---	14.5	14.0	14.5	22.5	21.0	21.5
29	---	---	---	16.5	14.5	16.0	14.5	13.0	14.0	22.5	21.0	22.0
30	---	---	---	19.0	16.0	17.5	14.0	12.5	13.5	23.5	21.5	22.5
31	---	---	---	17.0	15.0	16.0	---	---	---	24.0	22.5	23.0
MONTH	12.5	0.0	4.0	---	---	---	19.5	10.0	15.5	---	---	---
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	21.5	22.5	24.5	23.5	24.0	23.5	22.5	23.0	26.0	24.0	25.0
2	22.5	21.0	21.5	24.0	22.5	23.0	23.0	21.0	22.0	25.0	24.0	24.5
3	22.0	20.0	21.0	24.0	22.0	23.0	23.0	21.0	22.0	24.5	23.5	24.0
4	22.5	19.5	21.0	24.5	22.5	23.5	24.0	22.0	23.0	25.5	23.5	24.5
5	23.0	20.0	21.5	25.5	23.5	24.5	25.0	23.0	24.0	25.5	23.5	24.5
6	24.0	21.5	22.5	26.0	24.0	25.0	26.0	24.0	25.0	24.0	24.0	24.0
7	21.5	20.0	20.5	26.5	24.5	25.5	26.0	24.5	25.0	24.5	23.5	24.0
8	19.5	17.5	18.5	27.5	25.0	26.0	26.0	24.0	25.0	24.5	23.0	24.0
9	20.5	18.5	19.5	26.0	22.0	23.5	26.0	24.5	25.5	24.0	22.0	23.0
10	20.0	17.5	18.5	23.0	21.5	22.0	26.0	24.5	25.0	23.5	21.5	22.5
11	21.5	18.0	20.0	23.5	22.0	22.5	26.0	23.5	24.5	21.5	19.5	20.5
12	23.0	20.0	21.5	24.0	22.5	23.5	25.5	24.0	25.0	21.5	19.5	20.5
13	23.5	21.5	22.5	25.0	23.5	24.0	25.5	24.0	24.5	22.0	21.0	21.5
14	22.5	22.0	22.5	26.0	24.0	25.0	24.5	23.5	24.0	21.5	21.0	21.0
15	23.0	21.5	22.0	26.5	24.5	25.5	24.5	23.5	24.0	22.5	21.0	21.5
16	23.5	22.5	23.0	26.5	24.5	25.5	25.5	24.0	24.5	22.5	22.0	22.5
17	23.0	22.5	22.5	26.5	24.5	25.5	24.5	23.5	24.5	23.0	21.0	22.0
18	24.0	22.0	23.0	26.5	24.5	25.5	23.5	22.5	23.0	23.0	21.0	22.0
19	24.5	23.0	23.5	26.5	24.5	25.5	23.0	21.5	22.0	22.5	21.0	21.5
20	24.5	23.0	23.5	26.5	25.0	25.5	23.0	21.0	22.0	22.0	21.0	21.5
21	25.0	23.0	23.5	26.5	24.5	25.5	23.5	21.0	22.0	20.5	19.0	20.0
22	24.5	22.0	23.5	25.5	24.0	24.5	24.0	21.5	23.0	19.5	18.5	19.0
23	23.5	22.0	23.0	24.5	23.5	24.0	24.5	23.0	23.5	21.0	19.0	20.0
24	24.5	22.5	23.5	25.0	24.0	24.5	25.0	24.0	24.5	21.0	20.5	20.5
25	23.5	22.5	23.0	24.5	24.0	24.5	24.5	23.0	23.5	20.5	19.5	20.0
26	22.5	22.0	22.5	24.5	23.0	24.0	24.5	23.0	24.0	21.0	19.5	20.0
27	22.5	21.5	22.0	23.5	22.5	23.0	25.5	24.5	25.0	21.5	20.5	21.0
28	24.0	22.0	23.0	23.0	22.5	22.5	25.5	24.0	25.0	21.0	19.0	20.0
29	24.0	22.5	23.5	23.5	22.5	23.0	25.5	24.0	24.5	19.0	18.0	18.5
30	25.0	23.0	24.0	23.5	21.5	22.5	26.0	24.0	25.0	19.5	18.0	18.5
31	---	---	---	24.0	23.0	23.5	26.0	24.0	25.0	---	---	---
MONTH	25.0	17.5	22.0	27.5	21.5	24.0	26.0	21.0	24.0	26.0	18.0	21.5
YEAR	27.5	0.0	14.0									

03435770 SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN

LOCATION.--Lat 36°30'47", long 86°51'44", Robertson County, Hydrologic Unit 05130206, on left bank 150 ft (46 m) downstream from new bridge on State Highway 49, 1.2 mi (1.9 km) downstream from Beaver Dam Creek, 1.3 mi (2.1 km) northeast of Springfield, and at mile 30.8 (49.6 km).

DRAINAGE AREA.--65.6 mi^2 (169.9 km^2), includes 9.0 mi^2 (23.3 km^2) without surface drainage.

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 537 ft (164 m) from topographic map.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft^3/s (136 m^3/s) Mar. 21, 1976, gage height, 12.89 ft (3.929 m); minimum, 3.1 ft^3/s (0.088 m^3/s) Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s),and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	0300	1910	54.1	8.51	2.593	Mar. 12	1415	*3810	108	11.77	3.587
Mar. 4	0445	*3810	108	11.77	3.587						

Minimum discharge, 3.1 ft^3/s (0.088 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	45	11	10	20	149	44	45	21	40	37	7.1
2	9.2	38	14	8.9	16	121	57	43	21	31	29	6.5
3	7.8	33	13	15	21	427	102	44	20	25	26	19
4	6.5	29	13	20	26	2220	754	43	20	23	24	9.2
5	6.5	26	11	22	39	590	484	41	19	21	22	6.5
6	33	25	10	25	27	325	243	39	18	20	20	7.8
7	30	24	26	27	39	220	179	352	13	18	16	20
8	21	22	32	33	28	175	147	179	13	13	20	8.5
9	24	22	26	27	21	148	125	114	15	306	20	6.5
10	24	21	25	29	21	131	107	84	14	70	19	5.4
11	20	20	27	23	22	119	92	68	13	43	20	4.4
12	12	20	42	25	113	1560	80	54	14	37	10	3.5
13	9.2	19	45	25	99	577	72	47	18	32	8.5	9.2
14	7.1	19	40	78	65	305	68	44	20	28	29	27
15	7.1	13	37	189	49	218	62	42	19	26	35	28
16	6.5	14	33	115	42	171	54	40	35	24	28	21
17	6.5	12	30	103	39	146	50	38	22	22	24	19
18	6.5	11	28	111	38	139	47	36	20	21	22	12
19	6.5	12	26	74	36	116	45	34	27	20	19	174
20	24	10	26	55	33	103	44	32	22	19	16	50
21	26	9.8	24	47	31	90	43	30	19	19	12	29
22	20	8.6	20	41	30	84	60	30	125	57	19	23
23	14	8.5	22	37	129	73	108	28	124	41	32	19
24	26	8.6	24	36	898	67	164	28	45	26	21	17
25	85	8.8	22	33	267	63	115	27	54	37	12	27
26	72	13	24	29	178	57	86	27	75	32	10	39
27	39	26	22	30	303	53	70	26	67	24	38	48
28	30	21	22	36	188	57	59	25	40	22	20	42
29	28	20	21	36	---	56	53	24	32	53	12	30
30	53	12	18	25	---	48	47	24	28	155	9.2	26
31	78	---	21	22	---	45	---	23	---	43	8.5	---
TOTAL	757.4	571.3	755	1386.9	2818	8653	3661	1711	993	1348	638.2	744.6
MEAN	24.4	19.0	24.4	44.7	101	279	122	55.2	33.1	43.5	20.6	24.8
MAX	85	45	45	189	898	2220	754	352	125	306	38	174
MIN	6.5	8.5	10	8.9	16	45	43	23	13	13	8.5	3.5
CFSM	.37	.29	.37	.68	1.54	4.25	1.86	.84	.51	.66	.31	.38
IN.	.43	.32	.43	.79	1.60	4.91	2.08	.97	.56	.76	.36	.42

CAL YR 1976 TOTAL 33860.8 MEAN 92.5 MAX 1920 MIN 4.4 CFSM 1.41 IN 19.20
WTR YR 1977 TOTAL 24037.4 MEAN 65.9 MAX 2220 MIN 3.5 CFSM 1.01 IN 13.63

03436000 SULPHUR FORK RED RIVER NEAR ADAMS, TN

LOCATION.--Lat 36°30'55", long 85°03'32", Robertson County, Hydrologic Unit 05130206, on left bank 600 ft (183 m) downstream from county highway bridge, 2.8 mi (4.5 km) downstream from Millers Creek, 4.1 mi (6.6 km) southwest of Cedar Hill, 4.6 mi (7.4 km) south of Adams, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--186 mi^2 (482 km^2) includes 21 mi^2 (54 km^2) without surface drainage.

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 424.36 ft (129.345 m) above mean sea level, Sandy Hook datum. Jan. 20, 1939, to Nov. 25, 1940, nonrecording gage at site 600 ft (183 m) upstream at same datum.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--39 years, 241 ft^3/s (6.825 m^3/s), 17.60 in/yr (447 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft^3/s (1,000 m^3/s) Mar. 12, 1975, gage height, 30.86 ft (9.406 m), from floodmarks; minimum, 1.8 ft^3/s (0.051 m^3/s) Sept. 27, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known that of Mar. 12, 1975. Flood in June 1934 reached a stage of 25.1 ft (7.65 m), from floodmarks, discharge not determined. Flood in January 1937 reached a stage of about 22.6 ft (6.89 m), discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft^3/s (96.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	0715	3690	104	11.03	3.362	Mar. 12	1630	6410	182	14.94	4.554
Mar. 4	1315	*9010	255	18.01	5.489	Apr. 4	1930	3430	97.1	10.62	3.237

Minimum discharge, 10 ft^3/s (0.283 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	52	39	36	75	445	115	112	38	76	173	15
2	29	48	38	31	61	356	146	105	36	82	95	15
3	23	49	39	57	52	580	307	105	35	63	76	17
4	21	48	38	78	60	7270	1870	111	34	52	67	30
5	19	46	37	85	102	2060	1700	100	33	45	58	31
6	72	44	37	98	112	1080	850	90	33	42	51	24
7	79	42	48	105	93	767	606	480	32	37	43	28
8	47	42	67	115	84	593	476	437	32	34	44	29
9	42	42	65	105	67	480	383	257	31	831	43	25
10	44	41	60	110	52	404	327	180	31	266	37	19
11	37	39	61	90	53	359	278	147	31	136	42	14
12	30	39	76	100	210	3860	237	124	30	105	40	11
13	27	38	109	180	313	2090	207	111	31	82	33	11
14	24	37	92	270	200	978	190	100	40	73	33	63
15	22	43	81	550	157	715	173	90	40	61	104	69
16	21	52	72	367	127	545	157	81	36	53	115	59
17	20	45	67	339	109	445	144	75	51	47	85	41
18	19	36	67	367	102	415	133	68	43	40	72	34
19	19	36	61	266	95	346	127	64	541	36	49	171
20	41	36	55	211	85	297	116	61	800	34	32	190
21	60	35	58	185	78	254	111	55	211	32	25	81
22	43	33	52	167	73	229	130	54	264	39	38	60
23	33	33	57	153	128	195	169	52	245	121	110	47
24	39	32	61	145	2160	176	340	50	159	64	64	43
25	109	32	55	139	785	164	269	48	134	55	27	58
26	210	35	60	115	524	154	202	57	122	78	22	116
27	121	53	80	120	767	147	166	50	145	58	125	115
28	79	55	93	160	575	147	142	47	110	43	49	138
29	71	48	80	150	---	151	135	43	85	97	25	90
30	63	41	70	120	---	136	121	41	76	394	20	78
31	59	---	80	100	---	122	---	39	---	173	18	---
TOTAL	1558	1252	1955	5114	7299	25960	10327	3434	3529	3349	1815	1722
MEAN	50.3	41.7	63.1	165	261	837	344	111	118	108	58.5	57.4
MAX	210	55	109	550	2160	7270	1870	480	800	831	173	190
MIN	19	32	37	31	52	122	111	39	30	32	18	11
CFSM	.27	.22	.34	.89	1.40	4.50	1.85	.60	.63	.58	.32	.31
IN.	.31	.25	.39	1.02	1.46	5.19	2.07	.69	.71	.67	.36	.34

CAL YR 1976 TOTAL 96767 MEAN 264 MAX 5520 MIN 17 CFSM 1.42 IN 19.35
WTR YR 1977 TOTAL 67314 MEAN 184 MAX 7270 MIN 11 CFSM .99 IN 13.46

03436100 RED RIVER AT PORT ROYAL, TN

LOCATION.--Lat 36°33'17", long 87°08'31", Montgomery County, Hydrologic Unit 05130206, on left bank at county road bridge at Port Royal, 250 ft (76 m) downstream from Sulphur Fork,and at mile 25.5 (41.0 km).

DRAINAGE AREA.--935 mi^2 (2,422 km^2), includes 437 mi^2 (1,132 km^2) without surface drainage.

PERIOD OF RECORD.--July 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 376.25 ft (114.681 m) above mean sea level. July 13, 1961, to Oct. 9, 1963, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--16 years, 1,264 ft^3/s (35.80 m^3/s), 18.36 in/yr (466 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft^3/s (1,710 m^3/s) Mar. 13, 1975, gage height, 48.26 ft (14.710 m); minimum,54 ft^3/s (1.53 m^3/s) Sept. 17, 18, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 23, 1937, reached a stage of 44.4 ft (13.53 m), from flood profile of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft^3/s (312 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 4	2400	*21800	617	32.80	9.997	Mar. 13	0400	15300	433	28.27	8.617

Minimum daily discharge, 125 ft^3/s (3.54 m^3/s) Sept. 12, from hydrographic comparison with other stations.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	757	187	177	249	1930	770	608	249	421	770	140
2	225	537	182	182	254	1600	834	586	243	502	435	130
3	214	417	177	182	235	1590	1430	561	233	446	334	130
4	204	354	177	175	246	13500	3600	572	222	346	280	135
5	194	315	175	177	527	17900	6100	568	212	294	243	150
6	241	289	173	182	825	6700	4000	540	204	260	220	165
7	294	265	182	189	643	4050	3100	915	191	243	220	160
8	315	246	199	204	483	3170	2300	2390	182	222	212	150
9	249	235	209	201	366	2630	2000	1440	177	1580	209	145
10	225	228	220	199	331	2240	1800	1040	175	807	204	150
11	222	222	212	189	403	1990	1500	857	173	586	222	130
12	214	222	225	201	731	6540	1350	739	175	487	214	125
13	180	212	265	166	1870	13700	1220	659	228	397	220	220
14	182	204	306	254	1340	6030	1130	611	391	346	257	400
15	166	204	297	748	997	3940	1050	575	321	303	246	700
16	164	169	280	1250	811	3100	972	540	246	271	246	600
17	164	175	268	923	675	2580	903	498	309	249	243	500
18	160	191	254	919	597	2350	849	456	372	228	243	370
19	154	187	238	821	544	2110	802	431	403	214	238	420
20	177	184	233	701	487	1810	753	410	647	204	214	540
21	212	184	222	604	438	1610	713	384	471	191	184	340
22	199	177	196	540	403	1480	718	372	597	220	173	330
23	191	175	201	479	407	1340	802	363	1300	424	228	300
24	191	173	209	431	4060	1220	1000	354	739	378	283	270
25	249	171	191	363	4050	1130	1120	334	701	391	238	1000
26	600	175	194	315	2350	1060	943	384	807	407	194	3100
27	600	191	194	291	2400	1000	816	321	968	315	173	1900
28	384	199	194	294	2500	968	726	303	903	271	169	1200
29	306	199	191	397	---	943	680	291	619	407	160	900
30	306	191	187	417	---	896	643	280	468	951	156	700
31	421	---	191	327	---	830	---	265	---	651	150	---
TOTAL	7844	7448	6629	12498	29222	111937	44624	18647	12926	13012	7578	15500
MEAN	253	248	214	403	1044	3611	1487	602	431	420	244	517
MAX	600	757	306	1250	4060	17900	6100	2390	1300	1580	770	3100
MIN	154	169	173	166	235	830	643	265	173	191	150	125
CFSM	.27	.27	.23	.43	1.12	3.86	1.59	.64	.46	.45	.26	.55
IN.	.31	.30	.26	.50	1.16	4.45	1.78	.74	.51	.52	.30	.62

CAL YR 1976 TOTAL 421756 MEAN 1152 MAX 19900 MIN 154 CFSM 1.23 IN 16.78
WTR YR 1977 TOTAL 287865 MEAN 789 MAX 17900 MIN 125 CFSM .84 IN 11.45

NOTE.--No gage-height record Sept. 1-30.

03436700 YELLOW CREEK NEAR SHILOH, TN

LOCATION.--Lat 36°20'55", long 87°32'20", Montgomery County, Hydrologic Unit 05130205, on left bank on downstream end of pier of bridge on State Highway 13, 2.6 mi (4.2 km) west of Shiloh, 3.0 mi (4.8 km) downstream from Leatherwood Creek, 9.0 mi (14.5 km) east of Erin, and at mile 9.0 (14.5 km).

DRAINAGE AREA.--124 mi^2 (321 km^2).

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 1706: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 390.13 ft (118.912 m) above mean sea level. Prior to Oct. 14, 1957, nonrecording gage at same site and datum.

REMARKS.--Records poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--20 years, 178 ft^3/s (5.041 m^3/s), 19.49 in/yr (495 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft^3/s (317 m^3/s) Jan. 10, 1975, gage height, 15.68 ft (4.779 m); minimum, 16 ft^3/s (0.45 m^3/s) Aug. 21, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft^3/s (62.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 4	0900	*7590	215	13.76	4.194	Apr. 4	2100	2350	66.6	8.72	2.658
Mar. 12	1400	6740	191	13.26	4.042	Sept.25	1500	3760	106	10.51	3.203

Minimum discharge, 25 ft^3/s (0.66 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	54	39	36	48	236	120	150	49	40	36	31
2	33	51	39	35	47	188	110	139	48	37	35	31
3	32	50	38	36	45	430	250	136	47	45	34	30
4	31	47	38	37	45	5240	1050	136	47	43	32	29
5	30	46	37	37	45	1300	1220	136	47	43	30	29
6	33	44	38	38	44	668	561	126	46	42	31	42
7	36	43	40	39	43	466	388	122	45	42	32	32
8	33	43	40	38	42	366	325	122	45	42	52	31
9	33	42	40	39	41	298	280	115	45	45	40	28
10	32	43	40	40	41	267	240	106	43	44	37	27
11	31	42	41	37	41	241	210	98	44	42	39	26
12	31	41	43	36	57	3640	190	93	43	42	36	26
13	32	41	45	38	76	1330	170	88	45	42	37	26
14	32	40	46	48	75	641	160	84	53	42	42	31
15	31	40	45	77	71	447	140	80	50	42	46	53
16	31	39	45	83	67	336	130	77	46	42	37	52
17	31	39	44	72	63	250	120	72	46	42	32	39
18	30	39	44	69	62	190	115	70	46	40	34	36
19	31	38	43	66	60	170	110	68	44	40	35	65
20	36	38	42	67	59	170	110	66	45	40	34	69
21	39	37	41	61	56	150	110	64	44	40	32	50
22	36	37	40	59	55	140	115	62	45	40	31	42
23	34	37	40	56	67	150	121	61	49	64	37	38
24	42	37	39	55	623	140	198	58	47	48	34	58
25	58	37	40	53	344	130	241	56	64	42	32	600
26	59	39	40	51	235	120	220	56	56	37	31	220
27	54	44	39	52	379	120	188	53	70	35	30	140
28	48	41	39	53	313	130	164	53	55	34	29	110
29	46	40	37	52	---	145	164	53	46	37	59	90
30	54	39	37	51	---	160	154	53	42	40	38	76
31	56	---	37	50	---	135	---	53	---	39	33	---
TOTAL	1169	1248	1256	1561	3144	18394	7674	2706	1442	1293	1117	2157
MEAN	37.7	41.6	40.5	50.4	112	593	256	87.3	48.1	41.7	36.0	71.9
MAX	59	54	46	83	623	5240	1220	150	70	64	59	600
MIN	30	37	37	35	41	120	110	53	42	34	29	26
CFSM	.30	.34	.33	.41	.90	4.78	2.07	.70	.39	.34	.29	.58
IN.	.35	.37	.38	.47	.94	5.52	2.30	.81	.43	.39	.34	.65

CAL YR 1976 TOTAL 58151 MEAN 159 MAX 4000 MIN 30 CFSM 1.28 IN 17.45
WTR YR 1977 TOTAL 43161 MEAN 118 MAX 5240 MIN 26 CFSM .95 IN 12.95

NOTE.--No gage-height record July 17 to Aug. 18.

RESERVOIR IN CUMBERLAND RIVER BASIN, TN

03413500 LAKE CUMBERLAND.--Lat 36°52'09", long 85°08'45", Russell County, Hydrologic Unit 05130103, in pylon of Wolf Creek Dam on Cumberland River and 10 mi (16 km) southwest of Jamestown, Ky. DRAINAGE AREA, 5,789 mi^2 (14,994 km^2). PERIOD OF RECORD, April 1950 to current year. Prior to October 1954, published as Wolf Creek Reservoir. April to June 1950, published in WSP 1726. GAGE, water-stage recorder. Datum of gage is at mean sea level, Sandy Hook datum. Prior to Dec. 6, 1950, nonrecording gage at same site at datum 545.0 ft (166.12 m) higher.

Reservoir is formed by earth embankment and concrete gravity dam surmounted by 10 taintor gates 37 ft (11 m) high by 50 ft (15 m) wide. Final closure of dam made Aug. 7, 1950. Total capacity at elevation 760.00 ft (231.648 m) top of gates, is 3,070,000 cfs-days (7,512 hm^3), of which 1,056,000 cfs-days (2,584 hm^3) above elevation 723.00 ft (220.370 m), crest of spillway, are reserved for flood control and 1,080,000 cfs-days (2,643 hm^3) between elevation 673.00 ft (205.130 m), minimum power pool, and 723.00 ft (220.370 m) are used for power production. Figures given herein represent total contents, of which 934,000 cfs-days (2,285 hm^3) below elevation 673.00 ft (205.130 m) is dead storage. Reservoir is used for flood control, power, navigation, and recreation. Records furnished by Corps of Engineers.
Revisions.--WSP 1556: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 2,673,800 cfs-days (6,543 hm^3) Apr. 15, 1962, elevation, 747.12 ft (227.722 m); minimum, after first filling, 934,400 cfs-days (2,286 hm^3) Jan. 1, 1956, elevation, 673.01 ft (205.133 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 1,771,900 cfs-days (4,336 hm^3) Apr. 10, elevation, 713.15 ft (217.368 m); minimum, 1,022,400 cfs-days (2,502 hm^3) Feb. 9, elevation, 677.80 ft (206.593 m).

03416500 DALE HOLLOW LAKE.--Lat 36°32'19", long 85°27'05", Clay County, Hydrologic Unit 05130105, at Dale Hollow Dam on Obey River, 3 mi (5 km) east of Celina, and 7.3 mi (11.7 km) upstream from mouth. DRAINAGE AREA, 936 mi^2 (2,424 km^2). PERIOD OF RECORD, August 1943 to current year. Prior to October 1965, published as Dale Hollow Reservoir. GAGE, water-stage recorder. Datum of gage is at mean sea level, Sandy Hook datum. Prior to June 25, 1946, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity dam. Spillway is equipped with six taintor gates, each 12 ft (4 m) high by 60 ft (18 m) wide. Closure of dam was made Aug. 30, 1943; water in reservoir first reached minimum pool elevation May 7, 1944. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 663.0 ft (202.08 m), top of gates, is 859,800 cfs-days (2,104 hm^3) of which 177,500 cfs-days (434.3 hm^3) between elevations 663.0 ft (202.08 m) and 651.00 ft (198.425 m), crest of spillway, are reserved for flood control, and 250,200 cfs-days (612.2 hm^3) between elevations 651.00 ft (198.425 m) and 631.00 ft (192.329 m), ordinary minimum pool, are used for power production. Contents of 432,100 cfs-days (1,057 hm^3) below elevation 631.00 ft (192.329 m) is dead storage. Reservoir is used for flood control, navigation, and power. Records furnished by Corps of Engineers. Revisions --WSP 1306: 1944. WSP 2110: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 828,600 cfs-days (2,027 hm^3) Mar. 15, 1975, elevation, 660.98 ft (201.467 m); minimum, after first filling, 428,000 cfs-days (1,047 hm^3) Sept. 11, 1944, elevation, 630.63 ft (192.216 m)

EXTREMES FOR CURRENT YEAR: Maximum contents, 661,200 cfs-days (1,618 hm^3) Apr. 12, elevation, 649.48 ft (197.962 m); minimum, 463,200 cfs-days (1,133 hm^3) Dec. 2, elevation, 633.77 ft (193.173 m).

03418400 CORDELL HULL RESERVOIR.--Lat 36°17'23", long 85°56'39", Smith County, Hydrologic Unit 05130108, at Cordell Hull Dam on Cumberland River, 2.7 mi (4.3 km) north of Carthage, and at mile 313.5 (504.4 km). DRAINAGE AREA, 8,095 mi^2 (20,966 km^2). PERIOD OF RECORD, October 1972 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with 5 taintor gates, each 41 ft (12 m) high and 45 ft (14 m) wide. Closure of dam was made Oct. 4, 1967; water in reservoir first reached ordinary minimum pool Mar. 13, 1973. Total capacity at elevation 508.0 ft (154.84 m), maximum surcharge pool, is 156,700 cfs-days (383.4 hm^3), of which 53,400 cfs-days (130.7 hm^3) is controlled storage between elevations 508.0 ft (154.84 m) and 499.0 ft (152.10 m), ordinary minimum pool. Contents of 5,000 cfs-days (12.24 hm^3) between elevation of 499.0 ft (152.10 m) and 500.0 ft (152.40 m) full winter pool, is available for power production. Contents of 48,400 cfs-days (118.4 hm^3) above 500.0 ft (152.40 m) is available for flood control during the winter, and 26,100 cfs-days (63.87 hm^3) above 504.0 ft (153.62m), full pool during spring to fall season, is available for flood control the rest of the year. Contents of 103,300 cfs-days (252.8 hm^3) below elevation 499.0 ft (152.10 m) is dead storage. Reservoir is used for navigation, power, and flood control. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 156,700 cfs-days (383.4 hm^3) Mar. 13, 1975, elevation, 508.00 ft (154.838 m); minimum, after first filling to ordinary minimum pool, 96,700 cfs-days (236.6 hm^3) Apr. 18, 1974, elevation, 497.65 ft (151.684 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 134,900 cfs-days (330.1 hm^3) May 6, elevation, 504.70 ft (153.832 m); minimum, 101,500 cfs-days (248.4 hm^3) Dec. 17, elevation, 498.65 ft (151.988 m).

03422000 GREAT FALLS LAKE.--Lat 35°48'21", long 85°38'09", Warren County, Hydrologic Unit 05130108, at penstock inlet on Collins River, 700 ft (213 m) southwest of powerhouse of Tennessee Valley Authority, 1.5 mi (2.4 km) northwest of Rock Island, 1.8 mi (2.9 km) upstream from mouth of Collins River, and 2.0 mi (3.2 km) upstream from Great Falls Dam on Caney Fork. DRAINAGE AREA, 1,677 mi^2 (4,343 km^2). PERIOD OF RECORD, January 1917 to current year. GAGE, remote indicator gage. Datum of gage is at mean sea level.

Reservoir is formed by concrete gravity dam. Spillway is equipped with 18 taintor gates, each 14 ft (4 m) high by 25 ft (8 m) wide. Closure of dam was made in 1916; dam redesigned and crest raised 35 ft (11 m) in 1925. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 804.9 ft (245.33 m), top of gates, is 25,400 cfs-days (62.15 hm^3), of which 23,900 cfs-days (58.48 hm^3) are controlled storage above elevation 762.0 ft (232.26 m), minimum pool. Contents of 1,500 cfs-days (3.671 hm^3) below elevation 762.0 ft (232.26 m) is dead storage. Reservoir is used primarily for power. Records furnished by Tennessee Valley Authority. Revisions.--WSP 2110: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum midnight elevation, 817.48 ft (249.168 m) Mar. 23, 1929, contents not determined; minimum midnight contents, 1,700 cfs-days (4.160 hm^3) Aug. 19, 1918, elevation, 756.3 ft (230.52 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 28,500 cfs-days (69.74 hm^3) Apr. 4, elevation, 807.61 ft (246.160 m); minimum, 9,300 cfs-days (22.76 hm^3) Dec. 24, elevation, 784.04 ft (238.975 m).

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

03424000 CENTER HILL LAKE.--Lat 36°05'48", long 85°49'38", DeKalb County, Hydrologic Unit 05130108, at Center Hill Dam on Caney Fork, 10 mi (16 km) north of Smithville, 14 mi (23 km) southeast of Carthage, and at mile 26.6 (42.8 km). DRAINAGE AREA, 2,174 mi^2 (5,631 km^2). PERIOD OF RECORD, October 1948 to current year. Prior to October 1965, published as Center Hill Reservoir. GAGE, water-stage recorder. Datum of gage is at mean sea level, Sandy Hook datum. Prior to Mar. 14, 1949, nonrecording gage at site 1,320 ft (402 m) upstream at same datum.

Reservoir is formed by earth embankment and concrete gravity dam. Spillway is equipped with eight taintor gates, each 37 ft (11 m) high by 50 ft (15 m) wide. Closure of dam was made Nov. 27, 1948; water in reservoir first reached minimum pool elevation Jan. 11, 1949. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 685.0 ft (208.79 m), top of gates, is 1,054,800 cfs-days (2,581 hm^3), of which 384,500 cfs-days (940.9 hm^3) between 685.0 ft (208.79 m) and 648.0 ft (197.51 m), crest of spillway, are reserved for flood control, and 248,000 cfs-days (606.9 hm^3) between elevations 648.0 ft (197.51 m) and 618.0 ft (188.37 m), ordinary minimum pool, are used for power production. Contents of 422,300 cfs-days (1,033 hm^3) below 618.0 ft (188.37 m) is dead storage. Reservoir is used for flood control, navigation, and power. Records furnished by Corps of Engineers. Revisions.--WSP 1910: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 1,004,400 cfs-days (2,458 hm^3) Feb. 10, 1950, elevation, 680.6 ft (207.45 m); minimum, after first filling, 171,000 cfs-days (418.4 hm^3) Dec. 1, 2, 1949, elevation 576.1 ft (175.60 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 838,000 cfs-days (2,051 hm^3), Apr. 6, elevation, 665.20 ft (202.753 m); minimum, 451,100 cfs-days (1,104hm^3) Feb. 23, elevation, 621.85 ft (189.540 m).

03426300 OLD HICKORY LAKE.--Lat 36°17'50", long 86°39'20", Sumner County, Hydrologic Unit 05130201, at Old Hickory Dam on Cumberland River, 2.0 mi (3.2 km) west of Hendersonville, 10 mi (16 km) northeast of the State capitol in Nashville, and at mile 216.2 (347.9 km). DRAINAGE AREA, 11,673 mi^2 (30,233 km^2). PERIOD OF RECORD, June 1954 to current year. GAGE, water-stage recorder. Datum of gage is 408.5 ft (124.51 m) above mean sea level; gage readings have been reduced to elevation above mean sea level. Prior to Apr. 4, 1957, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with six taintor gates, each 41 ft (12 m) high and 45 ft (14 m) wide. Closure of dam was made in June 1954 and water in reservoir was raised sufficiently to maintain navigation through the lock. Water in reservoir first reached ordinary minimum pool elevation Dec. 30, 1956. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 450.0 ft (137.16 m), maximum surcharge pool, 274,600 cfs-days (671.9 hm^3) of which 63,000 cfs-days (154.2 hm^3) between elevations 450.0 ft (137.16 m) and 445.0 ft (135.64 m), normal pool, are induced surcharge storage provided to compensate for loss of natural valley storage incurred by construction of the project, and 31,800 cfs-days (77.82 hm^3) between elevations 445.0 ft (135.64 m) and 442.0 ft (134.72 m), ordinary minimum pool, are used for power production. Contents of 179,800 cfs-days (440.0 hm^3) below elevation 442.0 ft (134.722 m), is dead storage. Reservoir is used for navigation and power. Records furnished by Corps of Engineers. Revisions.--WSP 2110: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 276,200 cfs-days (675.9 hm^3) Mar. 13, 1975; elevation, 450.11 ft (137.194 m); minimum, after first filling to ordinary minimum pool, 179,400 cfs-days (439.0 hm^3) Oct. 22, 1957, Oct. 28, 1969, elevation, 441.96 ft (134.709 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 219,700 cfs-days (537.6 hm^3), Feb. 25, elevation, 445.70 ft (135.849 m); minimum, 190,400 cfs-days (465.9 hm^3) Sept. 23, elevation, 443.05 ft (135.042 m).

03430050 J. PERCY PRIEST RESERVOIR.--Lat 36°09'23", long 86°37'07", Davidson County, Hydrologic Unit 05130203, on upstream face of J. Percy Priest Dam on Stones River, 2.6 mi (4.2 km) east of Donelson, and 6.81 mi (10.9 km) above mouth. DRAINAGE AREA, 892 mi^2 (2,310 km^2). PERIOD OF RECORD, September 1967 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level. Prior to Dec. 15, 1967, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with four taintor gates, each 41 ft (12 m) high by 45 ft (14 m) wide. Closure of dam was made Sept. 18, 1967; water in reservoir first reached ordinary minimum pool May 15, 1968. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 504.5 ft (153.77 m), maximum controlled pool, is 328,700 cfs-days (804.3 hm^3) of which 193,600 cfs-days (473.7 hm^3) is controlled storage between elevations 504.5 ft (153.77 m) and 480.0 ft (146.30 m), ordinary minimum pool. Contents of 17,200 cfs-days (42.09 hm^3) between elevations 480.0 ft (146.30 m) and 483.0 ft (147.22 m), full winter pool, is available for power production. Contents of 176,400 cfs-days (431.7 hm^3) above 483.0 ft (147.22 m) is available for flood control during the winter, and 131,100 cfs-days (320.8 hm^3) above 490.0 ft (149.35 m), full pool during spring-to-fall season, is available for flood control the rest of the year. Contents of 135,100 cfs-days (330.6 hm^3) below elevation 480.0 ft (146.30 m) is dead storage. Reservoir is used for flood control, power, recreation, and wildlife. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 316,400 cfs-days (774.2 hm^3) Mar. 15, 1975, elevation, 503.41 ft (153.439 m); minimum, after first filling to ordinary minimum pool, 109,500 cfs-days (267.9 hm^3) Dec. 5, 1968, elevation, 474.75 ft (144.704 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 219,200 cfs-days (536.4 hm^3) Apr. 6, elevation, 492.90 ft (150.236m); minimum, 139,000 cfs-days (340.1 hm^3) Feb. 9, elevation, 480.70 ft (146.517 m).

03434900 CHEATHAM LAKE.--Lat 36°18'56", long 87°13'10", Cheatham County, Hydrologic Unit 05130202, at Cheatham Dam on Cumberland River, 9.4 mi (15 km) west of Ashland City, 16 mi (26 km) southeast of the courthouse in Clarksville, and at mile 148.7 (239.3 km). DRAINAGE AREA, 14,159 mi^2 (36,672 km^2).

Reservoir is formed by concrete gravity dam. Spillway is equipped with seven semi-submersible taintor gates, each 27 ft (8 m) high by 60 ft (18 m) wide. Total capacity at elevation 385.0 ft (117.35 m), normal pool, is 52,200 cfs-days (127.7 hm^3), of which 9,800 cfs-days (23.98 hm^3) are controlled storage. Records of contents not published herein.

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

03438210 LAKE BARKLEY.--Lat 37°01'17", long 88°13'16", Lyon County, Hydrologic Unit 05130205, in powerhouse of Barkley Dam on Cumberland River, 1.4 mi (2.3 km) northeast of Grand Rivers, Ky., and at mile 30.6 (49.2 km). DRAINAGE AREA, 17,598 mi^2 (45,579 km^2). PERIOD OF RECORD, July 1964 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level, levels by Corps of Engineers. Prior to Jan. 1, 1966, nonrecording gage, 1,200 ft (370 m) upstream from Barkley Dam at same datum.

Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with 12 taintor gates each 50 ft (15 m) high by 55 ft (17 m) wide. Construction cofferdam was closed and limited storage began July 1, 1964; reservoir reached ordinary minimum pool elevation of 354.0 ft (107.90 m) Feb. 16, 1966. Total level pool capacity at elevation 375.0 ft (114.30 m), top of gates, is 1,049,600 cfs-days (2,568 hm^3), of which 742,000 cfs-days (1,816 hm^3) is controlled storage above 354.0 ft (107.90 m), ordinary minimum pool. Contents of 130,500 cfs-days (319.3 hm^3) between ordinary minimum pool elevation, 354.0 ft (107.90 m), and full pool elevation, 359.0 ft (109.42 m), is available for power during the spring-to-fall season. Minimum pool elevation in advance of floods is 346.0 ft (105.46 m), contents 171,000 cfs-days (418.4 hm^3). Reservoir is used for navigation, flood control, power, and recreation. Barkley-Kentucky Canal opened June 13, 1966, for navigation and power use. Canal is 1.75 mi (2.82 km) long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi (3.5 km) upstream from Barkley Dam. For daily discharges through the canal, see station 03438190, Kentucky reports. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, level pool storage, 790,700 cfs-days (1,935 hm^3) Mar. 28, 1973, elevation, 369.10 ft (112.502 m); minimum since reaching permanent pool elevation of 354.0 ft (107.90 m), level pool storage, 291,100 cfs-days (712.3 hm^3) Dec. 31, 1968, elevation, 353.25 ft (107.671 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 486,400 cfs-days (1,190 hm^3) Apr. 25; maximum elevation, 359.77 ft (109.658 m) May 29; minimum contents, 298,200 cfs-days (729.7 hm^3) Dec. 29; minimum elevation, 353.20 ft (107.655 m) Dec. 20.

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03413500 LAKE CUMBERLAND			03416500 DALE HOLLOW LAKE			03418400 CORDELL HULL RESERVOIR		
Sept. 30.....	681.65	1095500	-	638.40	517900	-	503.89	130000	-
Oct. 31.....	684.75	1155700	+60200	635.91	488100	-29800	503.15	125600	-4400
Nov. 30.....	680.20	1067700	-88000	633.81	463700	-24400	501.30	115200	-10400
Dec. 31.....	683.20	1125400	+57700	635.41	482300	+18600	499.40	105300	-9900
CAL YR 1976	-	-	-158900	-	-	-61600	-	-	-6900
Jan. 31.....	678.90	1043100	-82300	636.22	491800	+9500	499.26	104600	-700
Feb. 29.....	684.20	1144900	+101800	636.56	495800	+4000	499.80	107300	+2700
Mar. 31.....	693.85	1340200	+195300	641.67	558300	+62500	500.15	109100	+1800
Apr. 30.....	700.70	1487200	+147000	647.70	637000	+78700	504.20	131900	+22800
May 31.....	690.20	1264800	-222400	645.92	613200	-23800	504.00	130600	-1000
June 30.....	689.90	1258700	-6100	644.14	589900	-23300	503.60	128200	-2400
July 31.....	684.65	1153700	-105000	642.28	566000	-23900	504.20	131900	+3700
Aug. 31.....	686.80	1196200	+42500	638.96	524700	-41300	503.60	128200	-3700
Sept. 30.....	685.60	1172400	-23800	636.91	500000	-24700	503.90	130000	+1800
WTR YR 1977	-	-	+76900	-	-	-17900	-	-	+300
	03422000 GREAT FALLS LAKE			03424000 CENTER HILL LAKE			03426300 OLD HICKORY LAKE		
Sept. 30.....	799.46	20300	-	633.95	547300	-	444.30	203800	-
Oct. 31.....	800.67	21400	+1100	632.81	537900	-9400	444.78	209100	+5300
Nov. 30.....	790.88	13600	-7800	628.10	499700	-38200	444.58	206900	-2200
Dec. 31.....	787.65	11400	-2200	628.70	504500	+4800	444.40	204900	-2000
CAL YR 1976	-	-	-14900	-	-	-47000	-	-	-8200
Jan. 31.....	788.45	11900	+500	624.30	469900	-34600	444.10	201600	-3300
Feb. 29.....	805.43	26000	+14100	625.70	480800	+10900	444.78	209100	+7500
Mar. 31.....	798.07	19100	-6900	644.90	642100	+161300	444.28	203600	-5500
Apr. 30.....	802.98	23500	+4400	645.00	643000	+900	444.40	204900	+1300
May 31.....	786.75	10900	-12600	642.00	616300	-26700	444.80	209400	+4500
June 30.....	788.60	12000	+1100	640.65	604500	-11800	444.70	208200	-1200
July 31.....	800.58	21300	+9300	637.35	576000	-28500	444.64	207600	-600
Aug. 31.....	799.92	20700	-600	636.75	570900	-5100	444.57	206800	-800
Sept. 30.....	804.43	24900	+4200	637.80	579800	+8900	443.95	200000	-6800
WTR Yr 1977	-	-	+4600	-	-	+32500	-	-	-3800
	03430050 J. PERCY PRIEST LAKE			03438210 LAKE BARKLEY*					
Sept. 30.....	489.84	196500	-	355.32	337400	-			
Oct. 31.....	488.53	187300	-9200	354.17	318200	-19200			
Nov. 30.....	483.72	156600	-30700	353.95	308700	-9500			
Dec. 31.....	482.08	146800	-9800	353.97	308500	-200			
CAL YR 1976	-	-	-7100	-	-	-27200			
Jan. 31.....	481.10	141200	-5600	354.00	311500	+3000			
Feb. 29.....	483.07	152700	+11500	355.13	341400	+29900			
Mar. 31.....	487.56	180700	+28000	354.10	315800	-25600			
Apr. 30.....	489.85	196600	+15900	359.28	461500	+145700			
May 31.....	489.83	196400	-200	358.98	442200	-19300			
June 30.....	489.91	197000	+600	358.26	419700	-22500			
July 31.....	489.57	194500	-2500	357.10	383200	-36500			
Aug. 31.....	489.75	195800	+1300	356.23	366300	-16900			
Sept. 30.....	490.05	198000	+2200	356.75	380800	+14500			
WTR YR 1977	-	-	+1500	-	-	+43400			

* Contents based on backwater profile.

03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN

LOCATION.--Lat 35°58'54", long 83°09'40", Cocke County, Hydrologic Unit 06010105, on left bank, 200 ft (60 m) upstream from bridge on U. S. Highway 411, 1.0 mi (1.6 km) northeast of Newport city limits, 3.7 mi (6.0 km) upstream from Pigeon River, and at mile 77.5 (124.7 km).

DRAINAGE AREA.--1,858 mi^2 (4,812 km^2).

PERIOD OF RECORD.--September to December 1900, February to August 1901, October to November 1901, November 1902 to December 1905, September to December 1907, October 1920 to current year. Monthly discharge only October to November 1920, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1933-34. WSP 823: Drainage area. WSP 893: 1928(M). WSP 1306: 1900-1908. WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932. WSP 1706: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,011.61 ft (308.339 m) above mean sea level. See WSP 1910 for history of changes prior to Mar. 31, 1934.

REMARKS.--Records fair. Diurnal fluctuation during low flow caused by powerplants above station. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--59 years (water years 1904-05, 1921-77), 2,969 ft^3/s (84.08 m^3/s), 21.70 in/yr (551 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,300 ft^3/s (2,160 m^3/s) Aug. 30, 1940, gage height, 19.25 ft (5.867 m); minimum, 208 ft^3/s (5.89 m^3/s) Oct. 23, 1952, gage height, 0.97 ft (0.296 m); minimum daily, 240 ft^3/s (6.80 m^3/s) Sept. 9, 1925; minimum gage height, 0.91 ft (0.277 m) Sept. 20, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--From reports of Tennessee Valley Authority, the flood of Mar. 7, 1867, gage height, 24 ft (7.3 m), present datum, discharge, estimated, 110,000 ft^3/s (3,120 m^3/s), has not been exceeded since that date. From the same reports, other outstanding floods occurred Feb. 28, 1902, gage height, 23.0 ft (7.01 m) present datum, discharge, estimated, 101,000 ft^3/s (2,860 m^3/s); and July 17, 1916, gage height, 22.5 ft (6.86 m), present datum, discharge, estimated, 97,000 ft^3/s (2,750 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft^3/s (453 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 30	2000	24400	691	10.55	3.216	Sept. 8	1330	18700	530	8.54	2.603
Apr. 5	0800	*61100	1730	17.57	5.355						

Minimum discharge, 651 ft^3/s (18.4 m^3/s) Aug. 3, 4, 5, gage height, 1.34 ft (0.408 m); minimum daily, 891 ft^3/s (25.2 m^3/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2260	2280	3170	3240	1810	3550	12100	3680	3870	3220	1080	1050
2	3210	2520	2780	2580	1790	3480	9960	3690	3280	3050	954	1010
3	2320	2380	2500	2530	1750	3310	11100	3810	2690	2460	891	955
4	1860	2200	2310	2640	1740	3160	11500	3870	2360	1980	1010	1040
5	1630	2070	2190	2570	1770	3110	41500	4390	2150	1760	1040	1000
6	1490	1970	2110	2510	1790	3500	18700	3860	2070	1790	1110	1360
7	1380	1900	2190	2780	1770	5370	13000	3480	2250	1540	1160	1180
8	2520	1840	5000	3060	1710	5960	10600	3350	2070	1460	1040	12300
9	6900	1730	6000	2760	1700	5650	8150	3090	1930	1360	1160	9480
10	10400	1650	4500	3170	1650	5400	6600	2900	1820	1330	1490	7340
11	8920	1600	3030	3080	1740	5140	5900	2790	1700	1430	1470	5170
12	6620	1600	2980	2620	1820	4910	5400	2700	1680	1670	1670	3020
13	3820	1660	4300	2420	1980	6080	4970	2560	1880	2020	1440	2290
14	3070	1720	4100	2420	2500	8970	4660	2470	2300	1500	1230	2070
15	2700	1710	4190	2560	2630	10400	4430	2410	3060	1300	1100	3180
16	2430	1660	7930	2820	2490	10000	4210	2390	2640	1240	1500	5360
17	2240	1640	7690	2780	2330	6780	3970	2320	2070	1130	1660	11300
18	2150	1610	6350	2430	2200	4850	3780	2260	2420	1260	3350	9780
19	2040	1550	5390	2270	2130	4230	3700	2290	3420	1090	2120	9200
20	1930	1500	4300	2180	2080	4130	3690	2220	2820	1150	1580	9210
21	1830	1450	3800	2120	2050	4310	3520	2310	2370	1180	1390	5420
22	1830	1430	4100	2150	2010	4330	3360	2290	2070	1280	1230	3610
23	1810	1440	3500	2140	1980	5030	3310	2320	2970	1460	1190	3110
24	1760	1420	3100	2140	2080	4360	4960	2710	3260	1310	1230	2850
25	1750	1390	2900	2150	3360	3890	6240	2620	4520	1170	1750	2700
26	2010	1370	2700	2150	3680	3560	4950	3340	5760	1570	1500	2630
27	2680	1390	2800	2130	3530	3320	4110	3350	3980	1370	1410	2490
28	2830	1500	3100	2140	3510	3150	3770	3290	2910	1180	1480	2290
29	2510	2130	2800	2110	---	3070	4190	3150	2390	1040	1340	2070
30	2290	3040	2500	1940	---	12200	4080	3170	2060	1100	1180	2080
31	2170	---	2300	1850	---	16000	---	3280	---	1100	1100	---
TOTAL	93360	53350	116610	76440	61580	171200	230410	92360	80770	47500	42855	126545
MEAN	3012	1778	3762	2466	2199	5523	7680	2979	2692	1532	1382	4218
MAX	10400	3040	7930	3240	3680	16000	41500	4390	5760	3220	3350	12300
MIN	1380	1370	2110	1850	1650	3070	3310	2220	1680	1040	891	955
CFSM	1.62	.96	2.03	1.33	1.18	2.97	4.13	1.60	1.45	.83	.74	2.27
IN.	1.87	1.07	2.33	1.53	1.23	3.43	4.61	1.85	1.62	.95	.86	2.53

CAL YR 1976 TOTAL 1223171 MEAN 3342 MAX 22300 MIN 974 CFSM 1.80 IN 24.49
WTR YR 1977 TOTAL 1192980 MEAN 3268 MAX 41500 MIN 891 CFSM 1.76 IN 23.89

03461000 PIGEON RIVER AT HARTFORD, TN

LOCATION.--Lat 35°48'52", long 83°03'42", Cocke County, Hydrologic Unit 06010106, 600 ft (183 m) downstream from highway bridge at Hartford, 4.5 mi (7.2 km) downstream from Big Creek, and at mile 21.3 (34.3 km).

DRAINAGE AREA.--547 mi^2 (1,417 km^2).

PERIOD OF RECORD.--February to August 1977.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
FEB												
23...	1000	1000	490	7.3	4.9	50	4	12.0	44	2.5	>2000	500
MAR												
08...	1000	2080	150	7.1	7.4	45	22	11.8	8	1.6	>2000	1180
APR												
12...	1010	1900	96	7.5	11.7	27	50	10.9	--	1.2	100	30
MAY												
11...	1020	750	270	7.2	17.0	50	24	9.3	21	1.1	2000	560
JUN												
07...	1030	660	180	6.7	18.2	35	11	8.8	--	2.1	3200	1000
JUL												
21...	1105	--	370	6.9	24.3	60	1	7.6	--	1.5	--	--
AUG												
09...	1000	--	540	7.4	23.1	70	1	8.2	30	1.5	2000	400

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
FEB												
23...	37	2.3	69	3.0	51	42	8.0	96	<.1	12	320	.44
MAR												
08...	--	--	--	--	15	12	--	--	--	--	--	--
APR												
12...	--	--	--	--	10	8	--	--	--	--	--	--
MAY												
11...	23	1.8	25	1.8	22	18	12	49	<.1	--	170	.23
JUN												
07...	--	--	--	--	18	15	--	--	--	--	--	--
JUL												
21...	--	--	--	--	28	23	--	--	--	--	--	--
AUG												
09...	48	2.3	47	3.0	39	32	26	120	<.1	--	360	.49

DATE	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL COPPER (CU) (UG/L)
FEB											
23...	864	6	.41	.19	.35	.08	600	<100	<10	<1	20
MAR											
08...	--	--	.50	.11	.14	.08	--	--	--	--	--
APR											
12...	--	--	.47	.10	.17	.09	--	--	--	--	--
MAY											
11...	344	16	.37	.07	.16	.04	600	<100	<10	<1	60
JUN											
07...	--	--	.30	.03	.15	.04	--	--	--	--	--
JUL											
21...	--	--	.37	.12	.08	.04	--	--	--	--	--
AUG											
09...	--	4	.62	.03	.09	.10	<200	<100	<10	<1	120

03461000 PIGEON RIVER AT HARTFORD, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB											
23...	860	230	<10	<10	190	120	<.2	<50	<10	70	15
MAR											
08...	1800	160	--	--	80	40	--	--	--	--	--
APR											
12...	2400	180	--	--	110	30	--	--	--	--	--
MAY											
11...	1200	330	<10	<10	150	130	<.2	<50	<10	150	6.8
JUN											
07...	650	300	--	--	60	40	--	--	--	--	--
JUL											
21...	620	140	--	--	120	100	--	--	--	--	--
AUG											
09...	350	250	<10	<10	80	80	<.2	<50	<10	<10	14

03461200 COSBY CREEK ABOVE COSBY, TN

LOCATION.--Lat 35°46'58", long 83°13'03", Cocke County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park on left retaining wall of creek, 400 ft (120 m) downstream from Crying Creek, 600 ft (180 m) upstream from bridge on State Highway 32, 3,600 ft (1100 m) upstream from Stillhouse Branch, 2.4 mi (3.9 km) southeast of Cosby, and at mile 10.7 (17.2 km). Prior to June 14, 1977, at site 600 ft (180 m) downstream.

DRAINAGE AREA.--10.1 mi^2 (26.2 km^2).

PERIOD OF RECORD.--Annual maximum, water years 1959-66 (1959-65 published as "near Cosby"); October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,644.07 ft (501.113 m) above mean sea level. Oct. 15, 1958, to Sept. 30, 1966, crest-stage gage at site 600 ft (180 m) downstream, at datum 1.08 ft (0.329 m) lower (gage heights adjusted to present datum in WSP 2110). Oct. 1, 1966 to June 13, 1977, water-stage recorder at site 600 ft (180 m) downstream.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--11 years, 28.6 ft^3/s (0.810 m^3/s), 38.08 in/yr (967 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft^3/s (48.7 m^3/s) Mar. 16, 1973, gage height, 4.11 ft (1.253 m) former site; about 17.1 ft (5.21 m) present site; minimum, 1.4 ft^3/s (0.040 m^3/s), Sept. 30, Oct. 1, 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s (7.08 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 4	2320	*838	23.7	a3.14	0.957	Sept. 7	2315	457	12.9	15.47	4.715
June 24	2100	383	10.8	15.28	4.657						

a 16.19 ft (4.935 m) present site, from floodmarks.

Minimum discharge, 3.8 ft^3/s (0.11 m^3/s) Feb. 10, result of freezeup.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	26	26	30	14	30	36	30	6.9	21	11	16
2	45	25	23	30	14	25	31	31	6.6	21	8.7	15
3	36	23	20	29	14	23	47	30	6.3	18	9.1	15
4	30	21	18	27	12	52	137	30	5.8	16	8.7	16
5	26	20	17	27	10	38	337	26	5.8	15	9.7	16
6	22	19	20	27	8.0	52	132	23	7.8	13	12	18
7	34	18	45	28	7.0	47	83	23	8.1	12	9.9	64
8	67	16	48	25	6.0	38	61	21	6.0	11	9.1	118
9	111	16	41	37	6.0	36	49	18	6.3	9.7	10	49
10	52	15	37	52	5.2	33	40	16	5.8	12	10	37
11	39	14	37	50	6.8	31	34	15	5.2	12	11	31
12	33	15	65	42	8.4	73	29	14	6.0	12	9.3	27
13	28	12	108	36	13	106	26	13	7.2	11	8.9	24
14	23	11	69	35	11	53	22	12	14	9.3	9.3	25
15	21	11	64	33	12	44	20	11	11	8.2	14	27
16	20	11	54	30	11	39	18	11	9.2	7.5	12	25
17	20	9.9	48	27	18	32	17	10	8.9	7.1	63	31
18	18	9.3	43	25	10	28	16	10	9.2	7.5	87	30
19	16	8.6	37	23	10	24	15	9.8	14	7.5	42	33
20	16	8.3	46	22	10	25	14	9.4	14	8.2	30	33
21	17	7.6	49	21	9.6	21	13	9.4	12	7.1	25	30
22	16	7.1	46	20	10	22	12	9.8	11	8.5	22	27
23	16	6.8	41	22	12	19	16	9.4	15	8.0	20	25
24	16	6.6	36	19	51	18	21	8.7	53	6.5	25	23
25	31	6.4	35	17	37	16	16	11	86	7.1	23	22
26	88	6.4	36	16	43	15	15	12	81	11	20	24
27	48	7.6	31	18	72	14	14	9.8	52	8.9	25	23
28	37	20	30	16	41	13	13	9.0	36	7.8	23	21
29	32	46	29	15	---	14	43	8.4	27	7.5	20	20
30	29	32	27	15	---	57	35	7.5	22	8.0	18	19
31	29	---	35	14	---	44	---	7.2	---	7.1	17	---
TOTAL	1070	455.6	1261	828	482.0	1082	1362	465.4	559.1	326.5	622.7	884
MEAN	34.5	15.2	40.7	26.7	17.2	34.9	45.4	15.0	18.6	10.5	20.1	29.5
MAX	111	46	108	52	72	106	337	31	86	21	87	118
MIN	16	6.4	17	14	5.2	13	12	7.2	5.2	6.5	8.7	15
CFSM	3.42	1.51	4.03	2.64	1.70	3.46	4.50	1.49	1.84	1.04	1.99	2.92
IN.	3.94	1.68	4.64	3.05	1.78	3.98	5.02	1.71	2.06	1.20	2.29	3.26

CAL YR 1976 TOTAL 9223.9 MEAN 25.2 MAX 113 MIN 2.9 CFSM 2.50 IN 33.97
WTR YR 1977 TOTAL 9398.3 MEAN 25.7 MAX 337 MIN 5.2 CFSM 2.55 IN 34.61

03461500 PIGEON RIVER AT NEWPORT, TN

LOCATION.--Lat 35°57'38", long 83°10'28", Cocke County, Hydrologic Unit 06010106, on left bank 100 ft (30 m) upstream from bridge on U. S. Highway 25 and 70 at Newport, 0.6 mi (1.0 km) downstream from Morell Branch, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--666 mi^2 (1,725 km^2).

PERIOD OF RECORD.--September 1900 to September 1929, October 1944 to September 1946, August 1948 to current year. Monthly discharge only for some periods, published in WSP 1306. Published as "near Newport" 1945-46.

REVISED RECORDS.--WSP 1143: Drainage area. WSP 1306: 1901, 1904-10. WSP 1336: 1903, 1917(M), 1919-20(M), 1921, 1924(M), 1927-29(M), 1948-52 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 1,038.76 ft (316.614 m) above mean sea level. Prior to Oct. 1, 1929, nonrecording gage at present site at datum 2.00 ft (0.610 m) higher. May 8, 1945, to July 22, 1946, water-stage recorder at site 4.8 mi (7.7 km) downstream at datum 35.85 ft (10.927 m) lower. August 13, 1948, to Sept. 30, 1970, at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Considerable regulation by Lakes Junaluska, Logan, and Walters for periods of low flow, combined usable capacity of reservoirs about 12,500 cfs-days (30.59 hm^3). The largest of these, Lake Walters, usable capacity, 10,400 cfs-days (25.45 hm^3), was completed in 1929. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--60 years, 1,252 ft^3/s (35.46 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s (1,420 m^3/s) Feb. 28, 1902, gage height, 23.4 ft (7.13 m), present datum, but due to removal of dam 1.3 mi (2.1 km) downstream in 1945, stage for this flood would be about 1.9 ft (0.58 m) lower under present conditions, from reports of Tennessee Valley Authority; minimum, 38 ft^3/s (1.08 m^3/s) Oct. 5, 1952, Sept. 13, 1954; minimum daily, 48 ft^3/s (1.36 m^3/s) Sept. 21, 28, 1953; minimum gage height, 1.68 ft (0.512 m), present datum, Sept. 13, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Mar. 7, 1867, and June 17, 1876, reached a stage of 23 ft (7.0 m), present datum,about 21.1 ft (6.43 m), present conditions, due to removal of mill dam in 1945, discharge, 48,000 ft^3/s (1,360 m^3/s), and flood of August 30, 1940, reached a stage of 19.3 ft (5.88 m), present datum, about 17.4 ft (5.30 m) present conditions, due to removal of mill dam in 1945, discharge, 36,000 ft^3/s (1,020 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft^3/s (212 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	1200	13700	388	10.22	3.115	Sept. 8	0245	9070	257	8.38	2.554
Apr. 5	0545	*40900	1160	*18.17	5.538						

Minimum discharge, 100 ft^3/s (2.83 m^3/s) Nov. 26, June 12, gage height, 2.04 ft (0.622 m); minimum daily, 103 ft^3/s (2.92 m^3/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	805	1320	1810	1780	647	2280	3590	1180	1460	2070	257	822
2	788	1180	1480	1730	538	1580	2980	1550	1420	1170	368	516
3	420	907	1080	1370	901	1320	4610	1690	1650	716	866	585
4	247	770	972	801	809	1860	5800	1500	589	388	760	552
5	453	740	399	1060	706	2290	26200	1540	206	859	354	640
6	856	325	827	1050	895	2770	7920	1330	718	1160	331	923
7	1190	609	1200	1390	557	2820	5030	1270	917	1060	541	1560
8	2720	665	1500	1550	654	2800	3930	565	426	1060	764	5520
9	4030	813	1920	1180	635	2210	3210	1010	791	917	634	3120
10	2450	850	1380	2020	432	1880	2810	761	421	267	410	1940
11	2110	520	508	2000	403	1890	2680	777	140	340	793	828
12	1560	859	586	1430	635	2100	2230	951	105	878	561	916
13	1130	524	1960	824	909	7020	2170	892	831	783	561	862
14	1090	539	1910	1160	855	4920	1970	647	1450	741	480	1260
15	951	584	2090	1510	718	3660	1970	181	1420	628	647	1470
16	645	581	2730	794	928	2730	1880	237	1090	243	705	1650
17	384	678	2110	1410	845	2510	1760	269	984	125	2000	2520
18	731	567	1740	1180	493	2620	1900	628	934	245	1600	2270
19	694	462	1720	951	485	2060	1860	1410	536	458	639	1700
20	719	140	1730	537	454	2030	1750	987	885	378	384	1470
21	537	287	1770	634	726	2050	1470	351	942	564	284	1420
22	640	660	1760	853	643	2440	1740	265	488	568	879	1470
23	649	947	1290	806	811	1950	1730	1650	522	478	811	1250
24	509	663	1040	460	2470	2380	1650	1980	835	146	1060	1040
25	609	174	1070	753	950	1420	1620	1230	2640	141	431	562
26	2110	103	1180	518	645	1580	1760	1130	2660	274	276	821
27	1910	187	1190	454	2590	1230	1270	1200	2280	205	530	1190
28	1390	202	973	548	2060	1070	1400	1440	1680	242	439	912
29	898	1560	1330	662	---	1360	1130	844	1560	630	439	482
30	995	1940	1060	520	---	4160	1400	1160	1930	244	252	788
31	634	---	1630	632	---	4490	---	1630	---	372	505	---
TOTAL	34854	20356	43945	32567	24394	77480	101420	32255	32510	18350	19561	41059
MEAN	1124	679	1418	1051	871	2499	3381	1040	1084	592	631	1369
MAX	4030	1940	2730	2020	2590	7020	26200	1980	2660	2070	2000	5520
MIN	247	103	399	454	403	1070	1130	181	105	125	252	482

CAL YR 1976 TOTAL 458086 MEAN 1252 MAX 6190 MIN 103
WTR YR 1977 TOTAL 478751 MEAN 1312 MAX 26200 MIN 103

03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN

LOCATION.--Lat 36°10'35", long 82°27'27", Washington County, Hydrologic Unit 06010108, on left bank, at Embreeville, 2,000 ft (600 m) upstream from bridge on State Highway 81, 3 mi (5 km) northwest of Erwin, 5.2 mi (8.4 km) downstream from North Indian Creek, and at mile 89.0 (143.2 km).

DRAINAGE AREA.--805 mi^2 (2,085 km^2).

PERIOD OF RECORD.--September 1900 to May 1901 (published as "near Chucky Valley"), October 1919 to current year. Monthly discharge only October 1919 to June 1920, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935(M). WSP 823: Drainage area. WSP 1336: 1921-24, 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 1,519.30 ft (463.083 m) above mean sea level. Sept. 1, 1900, to May 21, 1901, nonrecording gage at site 3 mi (5 km) downstream at different datum, destroyed by flood of May 21, 1901. July 1, 1920 to Sept. 30, 1931, nonrecording gage at bridge 2,000 ft (600 m) downstream at datum 6.33 ft (1.929 m) lower.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--58 years (water years 1920-77), 1,351 ft^3/s (38.26 m^3/s), 22.79 in/yr (570 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 82,500 ft^3/s (2,340 m^3/s) Aug. 13, 1940, gage height, 18.57 ft (5.660 m), from rating curve extended above 48,000 ft^3/s (1,360 m^3/s) on basis of slope area measurement of peak flow; minimum, 85 ft^3/s (2.41 m^3/s) Sept. 8, 9, 1925, gage height, 1.60 ft (0.488 m) site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of 24 ft (7.3 m), discharge, 120,000 ft^3/s (3,400 m^3/s), present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,500 ft^3/s (269 m^3/s) and maximum (*).

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1300	13400	379	6.10	1.859	Apr. 5	0630	*35700	1010	10.60	3.231
Mar. 13	0900	23200	657	8.25	2.515	Sept. 8	1100	15500	439	6.59	2.009
Mar. 30	1530	12400	351	5.87	1.789						

Minimum discharge, 477 ft^3/s (13.5 m^3/s) Nov. 24, minimum gage height, 1.35 ft (0.411 m) several days in September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	1140	1170	1340	714	2260	3590	1640	2050	1700	547	636
2	1500	932	967	975	697	1800	2750	1540	1560	1550	546	576
3	1050	867	875	1150	748	1530	4540	1620	1200	1310	598	504
4	793	828	775	1090	756	1500	5050	2560	1030	1120	560	522
5	674	784	731	1040	807	2340	23500	2730	937	1010	546	502
6	595	738	712	1020	664	3270	7990	1950	1000	934	544	502
7	647	704	3040	1120	620	4040	4760	1770	1650	872	756	593
8	4620	675	2880	995	616	2800	3710	1770	1080	814	555	8850
9	9240	641	1900	1090	654	2250	3090	1520	951	790	588	3940
10	4800	633	1520	1300	718	1930	2720	1370	909	925	818	2160
11	2530	631	1350	1020	812	1760	2450	1300	813	919	809	1540
12	1720	668	1580	774	952	1970	2230	1230	887	907	716	1140
13	1370	683	2420	915	1320	14200	2060	1170	1200	1020	570	938
14	1130	618	1970	980	1540	5910	1960	1110	1680	793	696	896
15	976	620	2220	1450	1470	3760	1860	1060	1490	708	747	946
16	880	622	3440	1380	1210	2990	1760	1000	1070	667	1220	1010
17	880	602	2470	918	962	2490	1650	936	967	641	987	2460
18	903	582	1970	839	881	2170	1540	905	1290	630	3190	2330
19	771	568	1660	984	908	1970	1590	888	1690	624	1590	1640
20	730	554	1560	968	981	2170	1650	894	2160	563	939	1700
21	782	549	1850	1000	860	2070	1460	1000	1700	560	729	1350
22	721	535	1400	908	791	2290	1360	859	1390	615	746	1050
23	665	517	1420	861	946	2440	1420	878	4090	634	656	911
24	656	495	1260	891	2750	2060	2590	883	3300	551	717	827
25	771	509	1140	874	3750	1850	2030	913	5230	621	901	772
26	2120	521	1280	822	2540	1710	1590	2300	3660	1310	686	776
27	1650	622	1150	815	2840	1580	1450	2140	3370	951	600	782
28	1220	732	1050	752	3460	1470	1370	1650	2850	661	581	734
29	1040	2120	1050	688	---	1420	2050	1650	2030	592	561	661
30	950	1900	914	635	---	6430	1920	1340	1640	640	546	627
31	1040	---	1450	772	---	6200	---	1440	---	590	556	---
TOTAL	49234	22590	49174	30366	35967	92630	97690	44016	54874	26222	24801	41875
MEAN	1588	753	1586	980	1285	2988	3256	1420	1829	846	800	1396
MAX	9240	2120	3440	1450	3750	14200	23500	2730	5230	1700	3190	8850
MIN	595	495	712	635	616	1420	1360	859	813	551	544	502
CFSM	1.97	.94	1.97	1.22	1.60	3.71	4.05	1.76	2.27	1.05	.99	1.73
IN.	2.28	1.04	2.27	1.40	1.66	4.28	4.51	2.03	2.54	1.21	1.15	1.94

CAL YR 1976 TOTAL 505055 MEAN 1380 MAX 13400 MIN 355 CFSM 1.71 IN 23.34
WTR YR 1977 TOTAL 569439 MEAN 1560 MAX 23500 MIN 495 CFSM 1.94 IN 26.31

03466258 NOLICHUCKY RIVER BELOW GREENEVILLE, TN

LOCATION.--Lat 36°07'58", long 82°45'34", Greene County, Hydrologic Unit 06010108, 2.3 mi (3.7 km) south of Tusculum, 2.6 mi (4.2 km) southeast of Greeneville, 3.0 mi (4.8 km) northeast of Sunnyside, and at mile 57.2 (92.0 km).

DRAINAGE AREA.--1,099 mi^2 (2,846 km^2).

PERIOD OF RECORD.--October 1976 to September 1977.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)
APR											
27...	1422	--	100	7.3	15.0	5	9	9	15	2.9	1.9
MAY											
23...	1400	1290	120	7.6	22.0	9	9	3	--	--	--
JUN											
27...	1400	4030	87	7.3	21.0	32	110	17	--	--	--
JUL											
25...	1400	--	140	7.3	25.0	10	13	6	21	4.0	2.4
AUG											
23...	1400	--	120	7.9	25.0	2	24	5	--	--	--
SEP											
27...	1306	--	110	7.6	21.0	5	7	4	--	--	--

DATE	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)
APR											
27...	.9	52	43	4.0	3.0	.1	60	.08	9	.48	.03
MAY											
23...	--	59	48	--	--	--	--	--	--	.39	.01
JUN											
27...	--	40	33	--	--	--	--	--	--	.58	.01
JUL											
25...	1.6	68	56	6.0	4.0	.1	80	.11	22	.26	.03
AUG											
23...	--	63	52	--	--	--	--	--	--	.50	.13
SEP											
27...	--	59	48	--	--	--	--	--	--	.38	<.01

DATE	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CO) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
APR											
27...	.06	.03	500	<2	<100	<10	100	<1	<5	20	510
MAY											
23...	.11	.03	--	--	--	--	--	--	--	--	270
JUN											
27...	.11	.11	--	--	--	--	--	--	--	--	390
JUL											
25...	.13	.03	400	<2	<100	<10	110	<1	<5	20	940
AUG											
23...	.15	.04	--	--	--	--	--	--	--	--	300
SEP											
27...	.06	.03	--	--	--	--	--	--	--	--	340

03466258 NOLICHUCKY RIVER BELOW GREENEVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR										
27...	<10	<10	40	.8	<50	<1	<10	<1000	20	1.2
MAY										
23...	--	--	50	--	--	--	--	--	--	--
JUN										
27...	--	--	160	--	--	--	--	--	--	--
JUL										
25...	<10	<10	100	<.4	<50	<1	<10	<1000	<10	2.5
AUG										
23...	--	--	40	--	--	--	--	--	--	--
SEP										
27...	--	--	40	--	--	--	--	--	--	--

03466500 NOLICHUCKY RIVER BELOW NOLICHUCKY DAM, TN

LOCATION.--Lat 36°03'59", long 82°52'18", Greene County, Hydrologic Unit 06010108, 0.2 mi (0.3 km) downstream from State Highway 70 bridge, 0.6 mi (0.9 km) northeast of Walker Ford, 3.2 mi (5.1 km) northeast of Cedar Creek, and at mile 45.7 (73.5 km).

DRAINAGE AREA.--1,184 mi^2 (3,067 km^2).

PERIOD OF RECORD.--Water years 1973 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
19...	1005	1250	120	7.3	11.0	7	3	11.8	3	--	--
NOV											
16...	1215	900	120	7.1	6.0	7	1	13.1	4	--	--
24...	1030	670	--	--	4.7	--	--	--	--	3.1	--
DEC											
06...	1225	950	120	7.2	3.3	2	3	14.7	2	--	--
FEB											
08...	1415	750	160	7.3	1.0	5	4	12.0	6	1.1	--
MAR											
08...	1350	4100	74	7.4	8.0	10	16	13.6	10	<1.0	1020
APR											
12...	1305	3600	120	7.9	16.3	10	7	10.4	--	<1.0	580
MAY											
11...	1220	1640	110	7.7	16.7	6	12	10.3	7	<1.0	400
JUN											
07...	1240	1520	110	7.3	22.1	4	19	8.9	--	1.8	5800
JUL											
21...	1325	--	160	7.4	29.0	8	6	7.9	--	1.5	--
AUG											
09...	1225	--	130	7.8	26.5	10	9	8.1	12	2.1	1800

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
19...	--	15	3.4	2.6	1.4	65	53	1.0	4.0	.1
NOV										
16...	--	14	3.0	2.4	.7	59	48	6.0	3.0	.3
24...	20	--	--	--	--	--	--	--	--	--
DEC										
06...	--	14	3.8	2.8	.9	63	52	3.0	3.0	.2
FEB										
08...	--	22	4.3	3.4	1.5	91	75	7.0	6.0	.3
MAR										
08...	120	--	--	--	--	29	24	--	--	--
APR										
12...	100	--	--	--	--	60	49	--	--	--
MAY										
11...	160	16	3.5	2.2	1.2	55	45	8.0	5.0	.1
JUN										
07...	800	--	--	--	--	52	43	--	--	--
JUL										
21...	--	--	--	--	--	76	62	--	--	--
AUG										
09...	--	20	3.9	3.2	1.7	70	57	6.0	3.0	.2

03466500 NOLICHUCKY RIVER BELOW NOLICHUCKY DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
19...	8.4	60	.08	202	12	.44	.02	.08	.07	.04
NOV										
16...	8.4	80	.11	194	3	.44	.07	.15	.06	.04
24...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	8.0	80	.11	205	2	.57	.03	.09	.07	.06
FEB										
08...	8.8	90	.12	182	3	.88	.10	.16	.08	.11
MAR										
08...	--	--	--	--	--	.66	.02	.14	.06	--
APR										
12...	--	--	--	--	--	.73	.02	.12	.06	--
MAY										
11...	--	70	.10	310	12	.58	.02	.06	.04	--
JUN										
07...	--	--	--	--	--	.50	.06	.09	.05	--
JUL										
21...	--	--	--	--	--	.20	.03	.10	.04	--
AUG										
09...	--	60	.08	--	23	.55	.05	.03	.11	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
19...	--	--	--	--	--	--	--	--	650	70
NOV										
16...	600	<2	<100	<10	60	<1	<5	20	720	140
24...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	220	90
FEB										
08...	<200	<2	<100	<10	30	<1	<5	50	680	300
MAR										
08...	--	--	--	--	--	--	--	--	1800	130
APR										
12...	--	--	--	--	--	--	--	--	460	60
MAY										
11...	<200	--	<100	<10	--	<1	--	20	560	140
JUN										
07...	--	--	--	--	--	--	--	--	570	300
JUL										
21...	--	--	--	--	--	--	--	--	820	<50
AUG										
09...	370	--	<100	<10	--	<1	--	10	690	60

03466500 NOLICHUCKY RIVER BELOW NOLICHUCKY DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
19...	--	--	90	50	--	--	--	--	--	--
NOV										
16...	<10	<10	90	30	.2	<50	1	<10	60	1.3
24...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	50	30	--	--	--	--	--	--
FEB										
08...	<10	<10	60	40	.4	<50	<1	<10	120	1.7
MAR										
08...	--	--	70	<10	--	--	--	--	--	--
APR										
12...	--	--	50	20	--	--	--	--	--	--
MAY										
11...	<10	<10	60	50	.5	<50	--	<10	50	2.4
JUN										
07...	--	--	80	70	--	--	--	--	--	--
JUL										
21...	--	--	70	30	--	--	--	--	--	--
AUG										
09...	<10	<10	60	30	<.2	<50	--	<10	50	1.9

03468510 FRENCH BROAD RIVER AT DOUGLAS DAM (TAILWATER), TN

LOCATION.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at downstream side of dam, 0.5 mi (0.8 km) downstream from Douglas Creek, 1.2 mi (1.9 km) north of Union Grove, and at mile 32.3 (52.0 km).

DRAINAGE AREA.--4,541 mi^2 (11,761 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
18...	0740	11220	150	6.2	19.0	12	5	5.6	10	--	--	15
NOV												
11...	0940	11700	--	--	12.2	--	--	--	--	1.2	<10	--
15...	0905	16600	160	6.9	11.0	12	4	6.7	7	--	--	13
DEC												
06...	0815	11500	160	7.1	7.0	10	6	8.0	8	--	--	16
JAN												
17...	0825	14070	180	7.1	2.0	21	43	9.9	6	--	--	20
FEB												
14...	0810	7061	200	7.3	2.5	19	4	9.5	4	--	--	21
MAR												
09...	0945	6300	200	7.1	7.0	13	5	7.8	9	--	--	20
APR												
18...	0800	13540	97	7.0	13.0	45	100	7.2	9	--	--	--
MAY												
16...	0800	11980	110	6.6	14.0	25	24	5.6	6	--	--	--
JUN												
13...	0925	14000	140	7.1	17.0	9	14	2.5	5	--	--	16
JUL												
18...	1030	8500	150	6.8	23.0	11	4	1.8	8	--	--	--
AUG												
22...	1200	15400	170	7.3	26.5	5	7	2.7	10	--	--	--
SEP												
21...	0950	16000	170	6.9	24.0	19	17	1.4	11	--	--	21

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
18...	2.7	12	1.9	43	35	20	15	<.1	7.4	110	.15	3330
NOV												
11...	--	--	--	--	--	--	--	--	--	--	--	--
15...	2.7	13	1.2	105	86	16	15	<.1	6.9	100	.14	4480
DEC												
06...	2.4	12	1.3	50	41	15	14	.1	6.5	110	.15	3420
JAN												
17...	3.6	10	1.3	56	46	21	14	<.1	7.2	110	.15	4180
FEB												
14...	4.0	13	1.5	65	53	--	--	<.1	--	--	--	--
MAR												
09...	3.2	14	1.6	55	45	21	16	<.1	--	100	.14	1700
APR												
18...	--	--	--	34	28	--	--	--	--	--	--	--
MAY												
16...	--	--	--	39	32	--	--	--	--	--	--	--
JUN												
13...	3.1	6.7	1.6	48	39	14	8.0	<.1	--	90	.12	3400
JUL												
18...	--	--	--	46	38	--	--	--	--	--	--	--
AUG												
22...	--	--	--	59	48	--	--	--	--	--	--	--
SEP												
21...	3.3	12	2.0	44	36	20	16	.1	--	110	.15	4750

03468510 FRENCH BROAD RIVER AT DOUGLAS DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT												
18...	10	.40	.14	.15	.03	--	--	--	--	--	--	--
NOV												
11...	--	--	--	--	--	--	--	--	--	--	--	--
15...	6	.46	.04	.09	.03	--	--	--	--	--	--	--
DEC												
06...	6	.42	.11	.13	.03	400	<2	<100	<10	70	<1	<5
JAN												
17...	25	.61	.16	.10	.05	--	--	--	--	--	--	--
FEB												
14...	5	.66	.18	.13	.03	--	--	--	--	--	--	--
MAR												
09...	3	.51	.21	.18	.06	700	--	<100	<10	--	<1	--
APR												
18...	--	.51	.10	.22	.08	--	--	--	--	--	--	--
MAY												
16...	--	.59	.03	.14	.04	--	--	--	--	--	--	--
JUN												
13...	9	.52	.01	.05	.01	1300	--	<100	<10	--	1	--
JUL												
18...	--	.60	.02	.07	.02	--	--	--	--	--	--	--
AUG												
22...	--	.16	.26	<.01	.02	--	--	--	--	--	--	--
SEP												
21...	10	.57	.03	.13	.03	1600	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
18...	--	710	--	--	100	--	--	--	--	--	--	--
NOV												
11...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	400	--	--	40	--	--	--	--	--	--	--
DEC												
06...	120	320	11	<10	70	1.6	<50	2	<10	<1000	40	3.1
JAN												
17...	--	1100	--	--	100	--	--	--	--	--	--	--
FEB												
14...	--	1100	--	--	170	--	--	--	--	--	--	--
MAR												
09...	10	710	<10	<10	100	<.2	<50	--	<10	<1000	60	2.5
APR												
18...	--	4600	--	--	40	--	--	--	--	--	--	--
MAY												
16...	--	430	--	--	50	--	--	--	--	--	--	--
JUN												
13...	<10	520	<10	<10	50	<.2	<50	--	<10	<1000	420	2.4
JUL												
18...	--	440	--	--	90	--	--	--	--	--	--	--
AUG												
22...	--	490	--	--	170	--	--	--	--	--	--	--
SEP												
21...	20	610	<10	<10	80	<.2	<50	--	<10	<1000	40	1.1

03470000 LITTLE PIGEON RIVER AT SEVIERVILLE, TN

LOCATION.--Lat 35°52'42", long 83°34'40", Sevier County, Hydrologic Unit 06010107, on left bank, 0.2 mi (0.3 km) downstream from West Prong Little Pigeon River, 0.6 mi (1.0 km) north of intersection of U. S. Highway 441 and State Highway 66 in Sevierville, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--353 mi^2 (914 km^2).

PERIOD OF RECORD.--October 1920 to current year. Prior to November 1920 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1921-34. WSP 1336: 1921(M), 1922, 1923(M), WRD Tn. 1972: 1969(M), 1970(M), 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 879.45 ft (268.056 m) above mean sea level. Nov. 23, 1920, to June 13, 1928, nonrecording gage, and June 14, 1928, to June 1, 1966; water-stage recorder, at site 0.1 mi (0.2 km) upstream at datum 1.99 ft (0.607 m) higher. June 2, 1966, to June 5, 1967, at site 1.5 mi (2.4 km) downstream at datum 7.31 ft (2.228 m) lower.

REMARKS.--Records good. Some regulation at low flow caused by small mills above station prior to 1967. During the period April 1966 to July 1967, Tennessee Valley Authority constructed a flood-control project for town of Sevierville, widening and deepening Little Pigeon River through the town and 1.8 mi (2.9 km) downstream, and relocating the lower portion of West Prong Little Pigeon River. The present gage is located on the new dredged channel. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--57 years, 571 ft^3/s (16.17 m^3/s), 21.97 in/yr (558 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft^3/s (1,160 m^3/s) Mar. 26, 1965, gage height, 16.09 ft (4.904 m), site and datum then in use; minimum, 2.8 ft^3/s (0.079 m^3/s) Sept. 21, 1925; minimum gage height, 0.08 ft (0.024 m) Dec. 23, 1965, site and datum then in use; minimum daily discharge, 8.4 ft^3/s (0.24 m^3/s) Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1875, reached a stage of 18 ft (5.5 m), discharge, 55,000 ft^3/s (1,560 m^3/s); that of Apr. 1, 1896, 16.8 ft (5.12 m), discharge, 46,000 ft^3/s (1,300 m^3/s); and that of Mar. 7, 1867, 16.5 ft (5.03 m), discharge, 43,000 ft^3/s (1,220 m^3/s) all at site 0.1 mi (0.2 km) upstream, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft^3/s (198 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0130	8260	234	6.27	1.911	Aug. 17	2000	8560	242	6.39	1.948
Mar. 30	1530	7990	226	6.16	1.878	Sept. 8	0330	8970	254	6.55	1.996
Apr. 5	0400	*24900	705	a11.49	3.502						

a From floodmarks.

Minimum discharge, 118 ft^3/s (3.34 m^3/s) June 12, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	960	481	570	972	258	792	1300	552	211	481	216	364
2	535	383	430	675	248	597	960	503	186	873	253	278
3	346	334	352	561	253	503	2730	535	170	511	358	248
4	268	300	305	496	248	910	4450	511	159	403	300	552
5	220	268	278	481	253	960	14100	458	148	346	253	284
6	190	239	263	503	207	1430	2870	396	144	311	278	403
7	665	225	947	838	182	1400	1730	416	268	284	230	1180
8	1250	211	1200	726	190	985	1250	437	190	258	194	4390
9	2630	194	814	935	207	758	972	358	162	234	234	1300
10	1150	190	635	1640	198	635	803	322	148	284	300	814
11	626	182	588	985	194	570	685	300	134	409	370	705
12	437	211	1170	737	207	1430	597	278	134	340	225	519
13	346	190	2030	588	278	3920	544	258	155	481	202	423
14	289	170	1210	544	253	1500	503	248	607	284	258	430
15	248	182	1420	561	273	1030	458	234	352	248	322	1070
16	220	186	1520	466	248	849	423	225	289	211	364	885
17	207	170	1050	334	216	695	390	211	352	190	2350	1230
18	197	162	781	416	225	597	364	194	273	174	2700	897
19	178	155	616	383	220	535	346	198	655	174	972	758
20	174	155	1030	377	225	607	328	194	861	178	579	726
21	198	148	1530	334	216	496	316	182	705	170	416	544
22	174	141	947	316	207	544	311	194	496	239	340	444
23	159	138	737	284	216	503	416	248	1230	396	289	383
24	155	131	579	289	726	444	769	268	960	220	503	340
25	370	131	503	284	716	409	544	244	3190	225	473	311
26	1900	134	597	273	616	377	430	416	3600	416	322	1070
27	910	194	511	466	1680	352	370	300	1840	305	364	985
28	552	910	473	437	1250	334	334	268	997	234	792	781
29	416	2330	451	334	---	383	570	358	665	202	346	552
30	358	985	396	328	---	5560	519	300	496	234	289	451
31	737	---	1460	340	---	2610	---	244	---	207	244	---
TOTAL	17065	9830	25393	16903	10210	32715	40382	9850	19777	9522	15336	23317
MEAN	550	328	819	545	365	1055	1346	318	659	307	495	777
MAX	2630	2330	2030	1640	1680	5560	14100	552	3600	873	2700	4390
MIN	155	131	263	273	182	334	311	182	134	170	194	248
CFSM	1.56	.93	2.32	1.54	1.03	2.99	3.81	.90	1.87	.87	1.40	2.20
IN.	1.80	1.04	2.68	1.78	1.08	3.45	4.26	1.04	2.08	1.00	1.62	2.46

CAL YR 1976 TOTAL 180675 MEAN 494 MAX 3150 MIN 88 CFSM 1.40 IN 19.04
WTR YR 1977 TOTAL 230300 MEAN 631 MAX 14100 MIN 131 CFSM 1.79 IN 24.27

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°57'30", long 83°46'26", Knox County, Hydrologic Unit 06010107, on left bank, 0.7 mi (1.1 km) downstream from Johnson Hollow, 7.5 mi (12.1 km) upstream from confluence with Holston River, and 8 mi (13 km) east of Knoxville.

DRAINAGE AREA.--5,101 mi^2 (13,212 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to December 1945 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Dec. 10, 1945 to Sept. 30, 1957, at site 200 ft (60 m) upstream on right bank at same datum.

REMARKS.--Water-discharge records good. Flow regulated by Douglas Lake (station 03468500), 24.6 mi (39.6 km) upstream.

AVERAGE DISCHARGE.--32 years, 7,849 ft^3/s (222.3 m^3/s), 20.90 in/yr (531 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,300 ft^3/s (1,820 m^3/s) Mar. 12, 1963, elevation, 832.20 ft (253.655 m), from rating curve extended above 36,000 ft^3/s (1,020 m^3/s); minimum, 67 ft^3/s (1.90 m^3/s) Oct. 25, 1953, elevation, 813.38 ft (247.918 m); minimum daily, 68 ft^3/s (1.93 m^3/s) Oct. 23-26, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of 855.0 ft (260.60 m), from floodmarks, estimated discharge, 160,000 ft^3/s (4,530 m^3/s), from investigations by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,300 ft^3/s (858 m^3/s) Apr. 5; elevation, 825.00 ft (251.460 m); minimum, 596 ft^3/s (16.9 m^3/s) Nov. 26, elevation, 814.81 ft (248.354 m); minimum daily, 1,320 ft^3/s (37.4 m^3/s) Feb. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4180	9250	9410	11100	10300	2780	7440	7580	11700	6980	7110	9500
2	3470	9580	7280	10400	8520	2780	10700	9450	9550	7580	7580	7490
3	3250	9070	10300	9130	1320	2690	12300	6630	11500	3020	5910	5350
4	3920	9320	8630	5830	3470	2630	9880	5000	10400	3320	7030	4400
5	4220	10300	9760	7160	3720	2870	21800	7720	6660	6570	6890	3770
6	4000	6520	8980	6250	4230	3400	8960	8600	11100	8710	6620	7720
7	6720	1800	10600	6440	4210	4360	17900	5630	9000	11800	3460	6510
8	6230	6340	14900	7300	6120	3560	20300	5250	8670	11800	6210	6830
9	7100	8790	13400	8900	6120	2840	19900	8370	8190	8130	6320	5280
10	5360	5640	10300	10000	5690	7490	19600	8830	10100	4360	7140	4440
11	5320	11200	5330	12500	6370	6000	18400	9650	8420	7270	7300	3910
12	6710	11100	10200	11900	5850	5340	14800	9190	5970	9710	6740	3970
13	6150	8950	9640	9370	2630	9360	14700	9400	10200	11600	7820	9100
14	7070	6050	11100	3250	1550	6770	14600	5960	6530	9200	4460	7740
15	8140	7780	12500	2290	3050	7690	14600	5190	8830	9730	7890	7620
16	7870	9890	13500	4510	6460	8480	14500	9990	9610	7610	9530	5990
17	6800	10800	12000	10600	6310	8530	14400	9460	10200	4570	8960	4660
18	9150	11700	15700	6830	4250	7970	14300	9490	7140	6970	11700	2120
19	9400	4830	16000	7120	2550	9090	11200	9170	4300	10300	4950	2340
20	8780	4690	17400	3500	2330	8520	11200	9230	8140	9650	3340	4100
21	11400	7620	17200	3630	3590	10300	11000	7480	10500	9920	3960	8620
22	8190	11300	14800	3630	4910	12800	11800	3850	10200	8850	6860	9480
23	8010	10800	10900	2330	1390	13100	6320	8180	9480	6180	7060	8680
24	5620	8030	10100	4760	4250	13000	4030	9460	7800	3170	8360	6590
25	6780	6310	11800	7570	2980	12900	4820	10500	9520	8080	9340	4270
26	6490	1980	11600	6870	2010	13100	8550	9360	7360	9820	9380	9080
27	5560	4620	12400	4710	3190	9730	9360	9500	7700	9370	8710	9650
28	6070	6530	12100	5940	4200	9610	9460	8270	9650	7080	6460	6320
29	6970	11200	6210	7700	---	9960	10600	4650	9310	8430	6450	4600
30	7170	9880	6610	4340	---	11400	8390	6740	8770	8470	8380	5050
31	4630	---	11000	6250	---	7910	---	10400	---	4030	8650	---
TOTAL	200730	241870	351650	212110	121570	236960	375810	248180	266500	242280	220570	185180
MEAN	6475	8062	11340	6842	4342	7644	12530	8006	8883	7815	7115	6173
MAX	11400	11700	17400	12500	10300	13100	21800	10500	11700	11800	11700	9650
MIN	3250	1800	5330	2290	1320	2630	4030	3850	4300	3020	3340	2120
(†)	+26500	-114600	-63200	-15400	+33900	+211600	+220000	-53900	-42700	-120300	-101900	+61000
MEAN‡	7330	4242	9305	6345	5552	14470	19860	6267	7460	3935	3828	8206
CFSM‡	1.44	.83	1.82	1.24	1.09	2.84	3.89	1.23	1.46	.77	.75	1.61
IN.‡	1.66	.93	2.10	1.43	1.13	3.27	4.34	1.42	1.63	.89	.87	1.79

CAL YR 1976 TOTAL 2734910 MEAN 7472 MAX 17400 MIN 1270 MEAN‡ 7425 CFSM‡ 1.46 IN.‡ 19.81
WTR YR 1977 TOTAL 2903410 MEAN 7955 MAX 21800 MIN 1320 MEAN‡ 8067 CFSM‡ 1.58 IN.‡ 21.47

†, Change in contents, in cfs-days, in Douglas Lake, furnished by Tennessee Valley Authority.
‡ Adjusted for change in contents in lakes or reservoirs listed above.

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1975 to current year.
WATER TEMPERATURES: June 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1975.

REMARKS.--No record Mar. 4-21 due to instrument malfunction. Flow regulated by Douglas Lake (station 03468500), 24.6 mi (39.6 km) upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 245 micromhos Aug. 20, 1977; minimum, 71 micromhos Apr. 5, 1977.
WATER TEMPERATURES: Maximum, 33.0°C Aug. 11, 12, 1977; minimum, 0.0°C Jan. 19, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 245 micromhos Aug. 20; minimum, 71 micromhos Apr. 5.
WATER TEMPERATURES: Maximum, 33.0°C Aug. 11, 12; minimum, 0.0°C Jan. 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
NOV												
02...	1315	5300	160	7.6	14.5	10	--	B13	B14	54	14	18
22...	1315	4900	160	7.8	9.0	9	--	--	--	53	12	17
DEC												
07...	1100	5800	165	7.8	7.5	10	--	139	B433	55	11	18
JAN												
10...	1000	6000	160	7.6	1.5	45	--	B350	1050	58	11	18
FEB												
22...	1330	3200	200	7.7	5.0	9	--	B2	<1	69	14	21
MAR												
22...	1015	11800	120	7.7	10.5	15	--	25	20	52	7	16
APR												
19...	1345	5000	115	7.6	15.0	60	--	84	23	--	--	15
MAY												
24...	1300	4200	120	6.9	16.0	20	--	73	78	46	5	14
JUN												
28...	1030	6600	150	6.9	21.5	6	--	470	94	51	0	16
JUL												
26...	1245	4600	150	7.4	25.0	8	--	112	107	51	11	16
AUG												
29...	1345	2500	180	7.3	28.0	15	--	--	--	63	16	20
SEP												
27...	1230	4200	170	7.1	22.5	30	--	970	--	53	20	17

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
NOV												
02...	2.2	12	32	.7	1.9	49	0	40	2.0	16	13	.2
22...	2.5	12	32	.7	2.0	50	0	41	1.3	16	13	.1
DEC												
07...	2.5	10	27	.6	1.8	54	0	44	1.4	16	13	.2
JAN												
10...	3.1	8.1	23	.5	1.6	57	0	47	2.3	16	9.2	.1
FEB												
22...	3.9	14	28	.7	7.1	66	0	54	2.1	22	14	.1
MAR												
22...	2.9	11	31	.7	1.7	55	0	45	1.8	16	11	.1
APR												
19...	--	4.1	--	--	1.9	42	0	34	1.7	9.1	4.7	.1
MAY												
24...	2.6	5.0	19	.3	1.7	50	0	41	10	10	5.2	.0
JUN												
28...	2.8	7.4	23	.4	1.8	67	0	55	13	11	7.8	.1
JUL												
26...	2.8	8.3	25	.5	1.9	49	0	40	3.1	12	9.2	.1
AUG												
29...	3.1	11	27	.6	2.0	57	0	47	4.6	15	14	.1
SEP												
27...	2.5	10	28	.6	2.4	40	0	33	5.1	15	13	.1

B--Results based on colony count outside acceptable range (non-ideal colony count).

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)
NOV												
02...	6.3	96	94	.13	1370	.45	--	--	.21	--	.66	2.9
22...	7.8	99	95	.13	1310	.42	--	--	.33	--	.75	3.3
DEC												
07...	7.1	99	95	.13	1550	.40	--	--	.30	--	.70	3.1
JAN												
10...	7.5	107	92	.15	1730	.51	--	--	.47	--	.98	4.3
FEB												
22...	8.2	133	123	.18	1150	.58	--	--	.41	--	.99	4.4
MAR												
22...	7.8	109	94	.15	3470	.62	--	--	.37	--	.99	4.4
APR												
19...	7.3	80	--	.11	1080	.56	--	--	.42	--	.98	4.3
MAY												
24...	7.3	80	71	.11	907	.56	--	--	.20	--	.76	3.4
JUN												
28...	7.8	78	88	.11	1390	.42	--	--	.22	--	.64	2.8
JUL												
26...	7.7	101	82	.14	1250	.55	--	--	.02	--	.57	2.5
AUG												
29...	6.7	112	100	.15	756	.27	--	--	.47	--	.74	3.3
SEP												
27...	7.5	100	87	.14	1130	.58	.05	--	--	.29	--	--

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	SUS-PENDED BARIUM (BA) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
NOV												
02...	.04	--	1	1	0	--	--	--	3	3	0	<10
22...	.02	--	--	--	--	--	--	--	--	--	--	--
DEC												
07...	.04	--	--	--	--	--	--	--	--	--	--	--
JAN												
10...	.10	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	.05	--	--	--	1	--	--	--	0	0	0	20
MAR												
22...	.04	--	--	--	--	--	--	--	--	--	--	--
APR												
19...	.11	--	--	--	--	--	--	--	--	--	--	--
MAY												
24...	.04	--	18	17	1	--	--	--	4	4	0	<10
JUN												
28...	.03	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	.02	--	--	--	--	--	--	--	--	--	--	--
AUG												
29...	.04	--	0	0	0	--	--	--	0	0	0	20
SEP												
27...	.08	.02	--	--	--	--	--	--	--	--	--	--

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)
NOV												
02...	<10	0	0	0	0	5	4	1	570	70	46	44
22...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
07...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	18	2	0	0	0	4	2	2	550	90	17	17
MAR												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
24...	0	<10	0	0	0	4	4	0	1600	50	56	56
JUN												
28...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
29...	18	2	0	0	0	5	5	0	900	50	3	3
SEP												
27...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)
NOV								
02...	2	50	10	.0	.0	.0	--	--
22...	--	--	--	--	--	--	--	--
DEC								
07...	--	--	--	--	--	--	--	--
JAN								
10...	--	--	--	--	--	--	--	--
FEB								
22...	0	70	30	.0	.0	.0	--	--
MAR								
22...	--	--	--	--	--	--	--	--
APR								
19...	--	--	--	--	--	--	--	--
MAY								
24...	0	40	30	.0	.0	.0	0	0
JUN								
28...	--	--	--	--	--	--	--	--
JUL								
26...	--	--	--	--	--	--	--	--
AUG								
29...	0	60	20	.0	.0	.0	0	0
SEP								
27...	--	--	--	--	--	--	--	--

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	SUS-PENDED SILVER (AG) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)
NOV									
02...	0	--	--	--	30	30	0	2.4	--
22...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
10...	--	--	--	--	--	--	--	--	--
FEB									
22...	0	--	--	--	20	20	0	9.8	--
MAR									
22...	--	--	--	--	--	--	--	--	--
APR									
19...	--	--	--	--	--	--	--	--	--
MAY									
24...	0	--	--	--	20	10	10	3.5	--
JUN									
28...	--	--	--	--	--	--	--	--	--
JUL									
26...	--	--	--	--	--	--	--	--	--
AUG									
29...	0	--	--	--	30	10	20	5.1	--
SEP									
27...	--	--	--	--	--	--	--	--	--

DATE	SUS-PENDED ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
NOV								
02...	--	1900	--	--	--	15	215	96
22...	--	340	--	--	--	8	106	85
DEC								
07...	--	650	--	--	--	11	172	100
JAN								
10...	--	1400	--	--	--	68	1100	99
FEB								
22...	--	--	--	--	--	10	86	100
MAR								
22...	--	--	--	--	--	30	956	89
APR								
19...	--	--	--	--	--	60	810	93
MAY								
24...	--	160	--	--	--	9	102	100
JUN								
28...	--	490	--	--	--	16	285	100
JUL								
26...	--	130	--	--	--	7	87	100
AUG								
29...	--	210	--	--	--	13	88	94
SEP								
27...	--	--	--	--	--	37	420	92

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	152	141	146	160	152	155	165	155	159	144	137	142
2	152	144	147	160	158	159	165	156	161	147	140	144
3	147	138	143	164	161	162	163	160	161	151	145	148
4	147	142	145	164	160	162	163	159	161	154	150	152
5	152	140	146	163	159	161	170	158	162	161	155	158
6	153	145	149	164	161	162	168	162	165	162	157	160
7	156	152	154	168	161	165	169	162	165	165	163	164
8	157	141	153	169	157	164	164	159	162	163	159	161
9	145	131	139	166	162	163	164	161	164	162	157	161
10	140	131	136	168	163	165	167	158	164	161	152	159
11	142	134	137	165	161	163	173	159	166	164	156	161
12	153	142	149	164	162	163	178	157	169	167	162	165
13	161	155	158	164	162	163	169	153	164	172	165	169
14	166	161	164	166	162	165	171	151	163	176	168	171
15	167	161	165	167	160	164	176	165	173	188	176	182
16	165	160	163	165	162	164	171	160	166	175	161	169
17	161	156	160	165	161	163	169	159	166	173	167	170
18	157	139	149	166	162	164	169	161	166	176	173	174
19	145	139	142	171	163	167	167	162	165	179	173	177
20	143	136	139	174	165	169	163	156	161	188	177	182
21	139	128	133	171	160	165	156	143	148	188	178	184
22	138	135	137	160	158	160	146	143	144	185	178	181
23	141	137	140	163	159	160	148	145	146	188	182	184
24	153	141	148	164	160	162	147	144	146	186	180	183
25	149	139	144	167	160	163	147	142	145	186	181	183
26	150	141	147	177	166	173	148	143	145	191	181	186
27	140	127	133	171	162	166	155	145	149	196	186	191
28	149	133	146	171	159	164	147	142	145	198	190	193
29	152	150	151	158	139	152	146	141	143	190	183	187
30	155	150	153	163	147	156	146	143	145	195	185	190
31	160	154	158	---	---	---	147	143	145	196	180	191
MONTH	167	127	148	177	139	163	178	141	158	198	137	172

	FEBRUARY			MARCH			APRIL			MAY		
1	191	183	185	186	166	178	146	105	129	115	108	113
2	193	185	188	193	174	187	142	116	129	115	111	113
3	200	194	197	199	172	188	130	111	120	116	111	114
4	204	194	199	---	---	---	117	82	93	117	112	114
5	200	193	197	---	---	---	105	71	86	117	112	115
6	201	193	197	---	---	---	110	87	102	115	108	112
7	201	191	195	---	---	---	106	97	103	114	108	112
8	194	187	190	---	---	---	103	101	102	115	112	113
9	195	188	191	---	---	---	104	101	102	115	109	112
10	195	189	192	---	---	---	106	100	103	114	110	112
11	195	188	191	---	---	---	111	102	106	112	109	110
12	197	190	193	---	---	---	108	107	107	112	108	110
13	202	191	196	---	---	---	107	105	106	115	109	111
14	208	197	204	---	---	---	106	104	105	118	109	115
15	213	187	204	---	---	---	110	105	107	119	112	115
16	199	188	194	---	---	---	104	94	100	118	112	114
17	199	193	196	---	---	---	96	90	93	115	111	113
18	202	195	198	---	---	---	98	92	95	115	111	113
19	205	195	201	---	---	---	121	91	109	116	111	114
20	209	196	204	---	---	---	122	108	113	117	112	114
21	206	191	200	---	---	---	116	107	111	117	112	114
22	204	193	198	128	120	122	114	106	109	119	114	116
23	209	199	204	128	119	122	117	107	114	119	114	116
24	207	193	202	119	115	117	119	114	116	121	113	117
25	209	199	204	114	110	113	129	111	121	122	114	117
26	214	194	206	110	105	108	118	107	112	122	114	118
27	216	159	191	108	104	106	112	106	109	126	115	119
28	192	167	183	108	104	106	110	104	107	127	116	121
29	---	---	---	109	105	107	110	103	108	131	116	125
30	---	---	---	109	96	105	114	107	111	131	117	125
31	---	---	---	145	92	122	---	---	---	126	117	121
MONTH	216	159	196				146	71	108	131	108	115

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	129	117	122	160	148	154	168	156	162	190	170	181
2	136	119	128	156	142	153	170	152	159	190	169	181
3	133	120	126	158	141	152	164	146	154	195	167	180
4	139	124	130	156	140	152	172	147	157	199	166	182
5	145	125	135	152	137	149	177	153	162	189	144	167
6	143	128	133	154	149	151	185	158	168	185	155	173
7	144	129	134	154	148	150	202	157	174	181	159	169
8	143	130	134	153	148	149	207	163	186	170	80	129
9	144	130	135	156	147	150	170	150	159	120	72	83
10	147	133	138	156	147	151	170	150	160	173	138	157
11	151	136	141	149	146	147	175	154	167	183	133	161
12	153	136	143	178	154	165	177	157	168	182	127	156
13	151	139	143	190	159	176	175	157	168	189	159	176
14	168	140	154	216	181	197	180	158	169	203	172	186
15	154	142	147	203	178	189	180	151	168	199	165	185
16	147	142	144	207	182	189	184	163	175	191	167	179
17	149	142	145	198	164	179	183	164	176	186	157	168
18	153	144	148	180	156	164	205	115	173	177	135	155
19	152	147	149	164	153	158	243	155	188	151	124	139
20	150	134	146	169	152	159	245	175	225	154	121	135
21	149	142	147	167	151	156	220	162	186	169	136	154
22	154	143	150	155	147	151	213	178	193	173	152	163
23	153	146	150	173	147	157	215	171	189	171	149	159
24	159	141	153	164	147	155	216	180	193	165	142	154
25	152	111	144	158	144	149	197	169	183	155	137	147
26	148	130	143	160	146	152	202	173	186	168	143	156
27	143	114	126	164	149	155	215	178	192	164	141	153
28	152	140	149	171	153	160	196	168	181	167	148	158
29	157	147	152	161	145	155	183	138	176	170	156	163
30	158	149	154	156	145	149	190	165	180	176	163	170
31	---	---	---	182	145	160	192	169	182	---	---	---
MONTH	168	111	141	216	137	159	245	115	176	203	72	161
YEAR	245	71	153									

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.0	15.0	21.5	15.5	13.0	14.5	7.5	6.5	7.0	3.5	2.5	3.0
2	22.5	20.0	21.0	15.0	14.5	15.0	8.0	7.0	7.5	3.0	2.0	2.5
3	23.5	20.0	21.5	15.0	14.0	14.5	8.0	7.0	7.5	3.0	2.5	2.5
4	24.0	21.0	22.5	15.0	13.5	14.0	8.0	7.0	7.5	2.5	2.5	2.5
5	24.5	22.0	23.0	14.0	13.0	13.5	8.0	7.0	7.5	3.5	2.5	3.0
6	23.0	22.0	22.5	13.5	12.0	13.0	7.5	7.0	7.5	2.5	2.5	2.5
7	22.5	21.5	21.5	13.5	11.5	12.5	8.0	7.5	7.5	3.0	2.0	2.5
8	22.0	19.5	21.0	12.5	10.0	11.0	7.5	6.5	7.0	2.5	2.0	2.5
9	20.0	17.0	19.0	12.5	11.5	12.0	7.0	6.0	6.5	2.0	1.5	2.0
10	20.5	18.0	19.0	13.0	12.0	12.5	7.0	6.0	6.5	1.5	1.0	1.5
11	20.0	16.0	18.5	12.5	12.0	12.0	7.5	6.0	6.5	2.0	0.5	1.5
12	21.0	19.5	20.0	12.5	11.5	12.0	7.5	6.5	7.0	1.5	0.5	1.5
13	21.5	19.5	20.5	11.5	11.0	11.0	6.5	5.5	6.0	2.0	1.0	1.5
14	21.5	20.0	20.5	11.5	10.0	10.5	6.0	5.0	5.5	3.0	2.0	2.5
15	20.5	19.5	20.0	11.5	10.5	11.0	6.0	5.0	6.0	4.5	2.5	3.0
16	20.5	19.0	19.5	11.5	11.0	11.5	6.5	5.5	6.0	3.0	1.0	2.5
17	19.5	17.5	18.5	11.5	10.5	11.0	6.5	5.0	5.5	1.5	0.5	1.0
18	18.0	17.0	17.5	11.5	10.5	11.0	6.0	5.0	5.5	1.5	0.5	1.0
19	18.5	17.5	18.0	11.5	10.0	10.5	5.5	5.0	5.5	1.0	0.0	1.0
20	18.5	17.0	17.5	11.0	10.0	10.5	5.5	5.0	5.5	1.5	1.0	1.5
21	17.5	16.5	17.0	10.0	9.0	9.5	5.0	4.5	4.5	1.5	0.5	1.0
22	17.0	16.0	16.5	9.0	8.5	9.0	5.0	4.0	4.5	2.5	0.5	1.5
23	17.5	16.0	17.0	9.5	8.5	9.0	4.5	4.0	4.5	2.5	0.5	1.5
24	17.5	17.0	17.0	9.5	8.5	9.0	4.5	4.0	4.5	2.5	1.5	2.0
25	17.0	16.5	17.0	10.0	8.5	9.5	4.5	4.0	4.0	3.0	2.0	2.5
26	17.0	14.0	16.0	9.5	9.0	9.0	5.0	4.5	4.5	3.0	2.0	2.5
27	15.0	13.5	14.5	11.0	9.5	10.0	5.0	4.0	4.5	3.5	2.5	3.0
28	15.5	13.5	14.5	11.0	9.5	10.0	5.0	4.5	5.0	3.0	0.5	2.0
29	16.0	14.5	15.0	9.5	7.5	8.5	5.0	3.0	4.0	1.5	0.5	1.0
30	15.5	14.5	15.0	7.5	6.5	7.0	4.0	2.5	3.5	2.5	0.5	1.5
31	15.5	14.0	15.0	---	---	---	4.0	2.5	3.5	2.5	0.5	1.5
MONTH	24.5	13.5	18.5	15.5	6.5	11.0	8.0	2.5	5.5	4.5	0.0	2.0

	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	1.5	2.0	7.5	6.0	6.5	15.0	12.5	13.5	16.5	14.5	15.5
2	2.5	1.5	2.5	8.5	5.5	6.5	13.5	12.0	13.0	15.5	14.5	15.0
3	3.0	1.5	2.5	7.5	6.0	6.5	14.5	12.5	13.5	15.5	14.0	15.0
4	5.0	3.0	4.0	---	---	---	14.0	13.0	13.5	18.0	15.0	16.0
5	4.5	3.0	3.5	---	---	---	14.0	11.5	13.0	17.0	15.0	16.0
6	3.5	1.5	2.5	---	---	---	12.0	10.5	11.0	17.0	15.0	16.0
7	3.5	1.0	2.0	---	---	---	13.5	11.0	12.0	17.5	14.5	16.0
8	3.0	1.0	2.5	---	---	---	13.5	12.0	13.0	19.0	15.0	16.5
9	4.0	2.0	3.0	---	---	---	14.0	12.5	13.0	17.5	15.0	16.0
10	5.0	3.0	4.0	---	---	---	14.5	12.5	13.5	16.5	13.5	15.0
11	4.5	3.0	4.0	---	---	---	14.5	13.0	13.5	16.0	14.0	15.0
12	4.5	3.5	4.0	---	---	---	14.5	13.0	14.0	16.5	14.0	15.5
13	6.0	3.5	4.5	---	---	---	14.5	13.0	13.5	16.5	14.0	15.5
14	6.0	4.0	5.0	---	---	---	14.5	13.0	14.0	18.0	14.5	16.0
15	6.5	5.0	5.5	---	---	---	14.5	13.0	13.5	19.5	15.0	16.5
16	5.5	3.0	4.0	---	---	---	14.5	13.0	14.0	17.5	15.0	16.5
17	4.0	3.0	3.5	---	---	---	14.5	13.0	13.5	17.5	15.0	16.0
18	5.5	3.0	4.0	---	---	---	14.0	13.0	13.5	17.0	15.0	16.0
19	6.0	4.0	5.0	---	---	---	15.5	13.0	14.0	17.5	15.0	16.5
20	5.5	4.5	5.0	---	---	---	15.5	14.0	14.5	18.0	15.5	16.5
21	5.5	4.0	4.5	---	---	---	15.5	14.0	14.5	17.5	15.5	16.5
22	6.5	3.5	5.0	10.5	9.5	10.0	15.0	14.0	14.5	18.5	16.5	17.0
23	7.5	4.5	6.0	11.5	9.5	10.5	16.5	14.0	15.0	18.5	16.0	17.0
24	9.0	6.5	7.5	11.5	10.0	11.0	16.5	14.5	15.5	17.5	15.5	16.5
25	10.0	6.0	8.0	12.5	11.0	12.0	17.5	14.5	16.0	17.5	15.5	16.5
26	10.5	8.0	9.0	13.0	11.5	12.5	14.5	13.5	14.0	17.5	16.0	16.5
27	10.5	8.5	9.5	13.0	11.5	12.5	15.0	13.0	14.0	18.0	16.0	17.0
28	10.0	7.0	8.0	13.5	12.0	12.5	15.0	13.5	14.5	20.0	16.5	17.5
29	---	---	---	13.5	11.5	12.5	15.0	14.0	14.5	21.0	16.5	18.0
30	---	---	---	15.0	12.5	13.5	16.5	14.5	15.0	21.0	17.5	19.0
31	---	---	---	15.5	14.0	14.5	---	---	---	19.0	16.5	17.5
MONTH	10.5	1.0	4.5				17.5	10.5	14.0	21.0	13.5	16.5

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.5	16.5	17.5	25.0	22.0	23.0	28.5	26.5	27.0	30.0	24.5	27.5
2	19.0	16.5	17.5	26.0	22.0	23.5	28.5	25.5	26.5	30.5	24.5	28.0
3	19.0	17.0	18.0	27.0	22.0	24.5	28.0	26.0	26.5	30.5	24.5	28.0
4	20.0	17.0	18.0	28.5	23.0	25.5	28.5	25.5	26.5	30.0	24.5	27.5
5	22.5	17.0	19.5	27.0	23.5	25.0	29.0	26.0	27.0	31.0	25.0	28.0
6	21.0	17.5	19.0	26.5	22.5	24.0	29.5	26.0	27.5	30.0	25.0	28.0
7	20.5	17.5	18.5	26.0	23.0	24.5	30.0	26.0	27.5	29.0	23.5	26.5
8	20.5	17.0	18.5	26.0	23.0	24.5	28.5	26.0	27.5	27.0	21.5	24.5
9	21.5	17.5	19.0	27.5	23.5	25.0	31.0	26.0	27.5	24.5	19.0	21.0
10	21.0	17.5	19.0	28.5	24.0	26.0	32.5	26.5	29.0	28.5	23.5	25.5
11	21.5	18.0	19.5	26.5	25.0	25.5	33.0	26.0	29.5	28.5	23.0	25.0
12	22.0	18.5	20.0	27.5	24.5	25.5	33.0	26.5	29.5	28.5	21.5	25.0
13	21.5	18.5	20.0	27.5	24.0	25.5	32.5	26.5	29.5	29.0	23.5	26.5
14	21.5	19.5	20.5	28.0	24.5	26.0	32.5	27.0	29.5	28.5	23.5	26.0
15	22.0	19.0	20.5	28.5	24.5	26.0	32.5	27.0	29.5	28.5	23.5	26.0
16	23.0	20.0	21.0	28.5	24.5	26.0	32.5	27.0	30.0	27.0	23.5	25.5
17	21.5	20.0	20.5	29.0	24.5	26.5	31.0	27.0	29.0	27.0	23.0	25.0
18	24.0	20.5	21.5	30.0	25.0	26.5	30.5	25.5	29.0	26.5	22.5	23.5
19	25.5	20.5	22.5	28.0	24.5	26.0	32.0	26.0	28.5	25.5	22.5	23.5
20	25.5	21.0	22.5	28.5	24.5	26.0	31.5	24.5	27.5	25.5	21.0	23.5
21	23.5	20.5	21.5	29.0	25.0	26.5	32.0	25.0	28.0	26.5	21.5	24.0
22	24.0	20.5	22.0	26.5	25.0	26.0	32.5	25.5	29.0	26.5	21.5	25.0
23	24.0	21.0	22.0	29.0	25.0	26.5	32.5	26.5	29.5	27.5	22.0	25.0
24	25.0	21.5	22.5	28.0	26.0	27.0	32.0	26.5	29.5	26.0	22.0	24.5
25	23.5	21.5	22.0	27.0	25.5	26.0	32.5	26.5	30.0	25.5	21.5	23.0
26	23.5	21.0	22.0	27.5	25.5	26.5	32.5	27.0	30.0	25.0	21.0	23.5
27	24.0	21.5	22.5	28.0	25.0	26.0	32.0	27.0	30.0	24.5	22.0	23.0
28	24.0	8.5	22.5	28.5	25.5	26.5	32.5	26.5	29.5	24.0	20.0	22.0
29	24.0	21.5	22.5	26.5	25.5	25.5	30.0	14.0	29.0	24.5	23.0	24.0
30	26.0	22.0	23.0	29.0	26.0	26.5	30.0	24.5	28.0	24.5	20.5	22.5
31	---	---	---	29.5	26.0	27.5	30.0	24.5	28.0	---	---	---
MONTH	26.0	8.5	20.5	30.0	22.0	25.5	33.0	14.0	28.5	31.0	19.0	25.0
YEAR	33.0	0.0	15.5									

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	NOV 2,76		NOV 22,76		DEC 7,76		JAN 10,77		FEB 22,77	
TIME	1315		1315		1100		1000		1330	
TOTAL CELLS/ML	1900		340		650		1400		270	
DIVERSITY: DIVISION	0.7		1.2		1.5		0.8		0.8	
.CLASS	0.7		1.2		1.5		0.8		0.8	
..ORDER	1.5		1.7		2.0		1.4		1.0	
...FAMILY	1.6		2.1		2.3		1.8		2.6	
....GENUS	1.7		2.4		2.4		1.9		3.3	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	12	1	25	7	71	11	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	14	2	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	24	1	--	-	18	3	--	-	--	-
....TETRASTRUM	--	-	25	7	--	-	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	--	-	6	2	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	24	1	25	7	4	1	--	-	--	-
....MELOSIRA	130	7	180#	54	340#	53	850#	63	7	3
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	48	3	6	2	11	2	14	1	7	3
....COCCONEIS	12	1	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	12	1	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	--	-	28	2	18	7
....EPITHEMIA	--	-	--	-	--	-	--	-	4	1
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	14	5
....FRAGILARIA	--	-	12	4	--	-	--	-	43#	16
....SYNEDRA	--	-	--	-	18	3	57	4	36	14
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	6	2	4	1	42	3	7	3
...NAVICULACEAE										
....NAVICULA	24	1	6	2	11	2	42	3	65#	24
...NITZSCHIACEAE										
....HANTZSCHIA	--	-	--	-	--	-	14	1	11	4
....NITZSCHIA	12	1	6	2	11	2	42	3	11	4
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....ANACYSTIS	1200#	65	--	-	36	5	--	-	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....LYNGBYA	360#	19	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	31	9	89	14	250#	19	29	11
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	6	2	18	3	14	1	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	--	-	--	-	4	1	--	-	14	5

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	MAY 24,77		JUN 28,77		JUL 26,77		AUG 29,77		SEP 27,77	
TIME	1300		1030		1245		1345		1230	
TOTAL CELLS/ML	160		490		130		210		1100	
DIVERSITY: DIVISION	0.6		1.4		1.6		1.1		0.7	
.CLASS	0.6		1.4		1.6		1.1		0.7	
..ORDER	1.0		1.5		1.6		1.4		0.7	
...FAMILY	1.2		2.2		2.1		2.0		0.9	
....GENUS	1.3		2.3		2.1		2.0		0.9	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...COELASTRACEAE										
....COELASTRUM	--	-	12	2	--	-	--	-	--	-
...MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	--	-	5	2	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	5	2	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	17	11	--	-	--	-	--	-	--	-
....OOCYSTIS	9	5	--	-	23#	17	--	-	--	-
....SELENASTRUM	--	-	12	2	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	49	10	--	-	130#	63	860#	81
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	3	1	--	-	--	-	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	3	1	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	*	0	--	-	21	10	--	-
....MELOSIRA	120#	76	*	0	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	--	-	6	1	--	-	--	-	130	13
....COCCONEIS	--	-	6	1	--	-	10	5	--	-
....RHOICOSPHENIA	--	-	15	3	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	6	1	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	4	3	--	-	--	-	--	-	--	-
...EUNOTIACEAE										
....EUNOTIA	--	-	*	0	--	-	--	-	--	-
...FRAGILARIACEAE										
....SYNEDRA	--	-	3	1	12	9	15	7	66	6
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	*	0	6	4	10	5	--	-
...NAVICULACEAE										
....NAVICULA	4	3	52	11	12	9	--	-	--	-
...NITZSCHIACEAE										
....HANTZSCHIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	4	3	40	8	6	4	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	70#	52	--	-	--	-
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	280#	57	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	3	1	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	--	-	--	-	6	4	5	2	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	5	2	--	-

03476010 SOUTH FORK HOLSTON RIVER AT SOUTH HOLSTON DAM (TAILWATER), TN

LOCATION.--Lat 36°31'26", long 82°05'26", Sullivan County, Hydrologic Unit 06010102, at downstream side of dam, 1.4 mi (2.2 km) southeast of Emmett, 3.0 mi (4.8 km) southwest of Holston Valley, and at mile 49.8 (80.1 km).

DRAINAGE AREA.--703 mi^2 (1,821 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
19...	0900	2600	170	6.8	14.0	5	<1	4.8	6	<1.0	10	25
NOV												
23...	0830	2500	180	7.5	11.0	5	<1	6.8	10	--	--	24
DEC												
14...	0730	1514	180	7.8	10.0	5	1	6.8	2	--	--	22
JAN												
18...	1000	2540	180	7.3	5.0	4	<1	8.8	3	--	--	24
FEB												
15...	0820	2181	160	7.8	4.0	9	6	11.0	3	--	--	--
MAR												
22...	1000	2600	160	7.8	5.0	4	2	10.1	3	--	--	29
APR												
19...	0730	2400	160	7.8	10.0	5	3	--	8	--	--	--
MAY												
17...	0900	2400	180	7.5	7.0	5	<1	8.0	2	--	--	--
JUN												
14...	1200	2400	170	7.8	7.5	4	2	7.1	3	--	--	22
JUL												
19...	0945	2000	160	7.4	10.0	5	3	5.6	4	--	--	--
AUG												
16...	0930	2600	160	7.3	10.0	2	2	--	3	--	--	--
SEP												
20...	1000	2900	180	7.5	15.0	5	2	1.1	5	--	--	31

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SID2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
19...	6.8	2.3	1.6	88	72	9.0	4.0	<.1	4.3	90	.12	632
NOV												
23...	7.7	2.7	1.1	100	82	6.0	4.0	<.1	3.1	110	.15	742
DEC												
14...	7.7	1.9	1.1	93	76	9.0	4.0	<.1	1.8	80	.11	327
JAN												
18...	6.9	1.9	1.3	109	89	18	2.0	<.1	1.9	80	.11	549
FEB												
15...	--	--	--	98	80	--	12	<.1	--	100	.14	589
MAR												
22...	7.1	1.9	1.4	95	78	--	4.0	<.1	--	110	.15	772
APR												
19...	--	--	--	95	78	--	--	--	--	--	--	--
MAY												
17...	--	--	--	90	74	--	--	--	--	--	--	--
JUN												
14...	6.5	2.4	1.6	88	72	7.0	5.0	<.1	--	100	.14	648
JUL												
19...	--	--	--	79	65	--	--	--	--	--	--	--
AUG												
16...	--	--	--	77	63	--	--	--	--	--	--	--
SEP												
20...	7.2	2.0	1.3	94	77	7.0	5.0	<.1	--	100	.14	783

03476010 SOUTH FORK HOLSTON RIVER AT SOUTH HOLSTON DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT 19...	2	.49	.06	.08	<.01	--	--	--	--	--	--	--
NOV 23...	1	.38	.08	.08	.02	--	--	--	--	--	--	--
DEC 14...	<1	.34	.03	.07	.01	<100	<2	<100	<10	20	<1	<5
JAN 18...	<1	.32	.04	.12	.01	--	--	--	--	--	--	--
FEB 15...	2	.44	.03	.05	.02	--	--	--	--	--	--	--
MAR 22...	2	.53	.01	.07	.01	<200	--	<100	<10	--	<1	--
APR 19...	--	.56	.01	.05	.01	--	--	--	--	--	--	--
MAY 17...	--	.59	<.01	.07	.01	--	--	--	--	--	--	--
JUN 14...	<1	.65	.03	.04	.01	<200	--	<100	<10	--	<1	--
JUL 19...	--	.75	.10	<.01	<.01	--	--	--	--	--	--	--
AUG 16...	--	.70	<.01	.04	.02	--	--	--	--	--	--	--
SEP 20...	2	.57	.05	.05	.01	<200	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT 19...	--	210	--	--	50	--	--	--	--	--	--
NOV 23...	--	70	--	--	50	--	--	--	--	--	--
DEC 14...	50	20	<10	<10	90	1.5	<50	<10	<1000	20	2.0
JAN 18...	--	70	--	--	70	--	--	--	--	--	--
FEB 15...	--	310	--	--	<10	--	--	--	--	--	--
MAR 22...	20	70	<10	<10	40	.2	<50	<10	1000	330	.9
APR 19...	--	<50	--	--	<10	--	--	--	--	--	--
MAY 17...	--	90	--	--	<10	--	--	--	--	--	--
JUN 14...	10	200	<10	<10	10	<.8	<50	<10	<1000	150	1.0
JUL 19...	--	210	--	--	<10	--	--	--	--	--	--
AUG 16...	--	130	--	--	<10	--	--	--	--	--	--
SEP 20...	10	70	<10	<10	10	<.2	<50	<10	<1000	170	.2

03483950 WATAUGA RIVER BELOW WATAUGA DAM, TN

LOCATION.--Lat 36°19'48", long 82°07'34", Carter County, Hydrologic Unit 06010103, at Watauga Dam powerhouse, 3.5 mi (5.6 km) northeast of Braemar, 4.0 mi (6.4 km) northeast of Valley Forge, 4.2 mi (6.8 km) southeast of Elizabethton, and at mile 35.8 (57.6 km).

DRAINAGE AREA.--468 mi^2 (1,212 km^2).

PERIOD OF RECORD.--Water years 1973, 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
19...	1137	2778	71	6.2	14.0	1	<1	4.3	4	<1.0	10	8.0
NOV												
15...	0930	1400	75	5.8	12.0	5	1	8.0	4	--	--	4.0
29...	1330	2600	76	6.8	10.0	5	2	9.1	2	--	--	6.0
JAN												
17...	1000	3500	71	6.8	5.0	5	6	9.6	3	--	--	7.0
FEB												
15...	0900	2222	76	7.3	2.5	7	4	11.7	2	--	--	--
MAR												
14...	0800	1400	75	7.7	4.0	6	4	11.5	3	--	--	9.0
APR												
18...	1225	2400	73	7.5	6.0	4	6	9.9	2	--	--	--
MAY												
18...	0730	2700	75	6.8	7.0	3	2	8.6	2	--	--	--
JUN												
20...	1710	2750	71	7.2	8.0	9	4	9.0	2	--	--	8.0
JUL												
13...	0840	2000	71	7.1	8.0	5	3	--	4	--	--	--
AUG												
22...	1830	2750	72	6.8	9.0	2	2	6.4	3	--	--	--
SEP												
20...	1730	2800	72	7.1	10.0	5	2	6.2	5	--	--	7.8

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
19...	3.4	2.4	1.2	32	26	6.0	4.0	<.1	5.9	30	.04	225
NOV												
15...	2.7	2.1	.9	32	26	6.0	4.0	<.1	6.0	60	.08	227
29...	3.5	2.5	1.0	33	27	5.0	12	<.1	5.6	60	.08	421
JAN												
17...	3.2	2.0	1.0	32	26	7.0	4.0	<.1	4.6	40	.05	378
FEB												
15...	--	--	--	33	27	--	3.0	<.1	--	60	.08	360
MAR												
14...	3.4	2.2	1.1	32	26	6.0	3.0	<.1	--	60	.08	227
APR												
18...	--	--	--	32	26	--	--	--	--	--	--	--
MAY												
18...	--	--	--	30	25	--	--	--	--	--	--	--
JUN												
20...	3.2	2.9	1.3	29	24	6.0	4.0	.1	--	50	.07	371
JUL												
13...	--	--	--	29	24	--	--	--	--	--	--	--
AUG												
22...	--	--	--	26	21	--	--	--	--	--	--	--
SEP												
20...	3.6	2.0	1.0	30	25	6.0	4.0	<.1	--	40	.05	302

03483950 WATAUGA RIVER BELOW WATAUGA DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT												
19...	3	.48	.01	.08	<.01	--	--	--	--	--	--	--
NOV												
15...	1	.39	.03	.08	.01	--	--	--	--	--	--	--
29...	2	.34	.04	.06	.01	200	<2	<100	<10	60	<1	<5
JAN												
17...	4	.38	<.01	.07	.01	--	--	--	--	--	--	--
FEB												
15...	2	.43	.01	.01	.01	--	--	--	--	--	--	--
MAR												
14...	6	.36	.03	.05	.02	<200	--	<100	<10	--	<1	--
APR												
18...	--	.43	<.01	.08	.01	--	--	--	--	--	--	--
MAY												
18...	--	.46	.01	.06	<.01	--	--	--	--	--	--	--
JUN												
20...	1	.53	.01	.05	.01	<200	--	<100	<10	--	2	--
JUL												
13...	--	.54	<.01	.05	<.01	--	--	--	--	--	--	--
AUG												
22...	--	.57	<.01	.02	.01	--	--	--	--	--	--	--
SEP												
20...	<1	.57	.14	.04	.01	<200	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
19...	--	110	--	--	70	--	--	--	--	--	--	--
NOV												
15...	--	100	--	--	120	--	--	--	--	--	--	--
29...	<10	190	<10	<10	80	.2	<50	1	<10	<1000	160	1.1
JAN												
17...	--	120	--	--	10	--	--	--	--	--	--	--
FEB												
15...	--	460	--	--	30	--	--	--	--	--	--	--
MAR												
14...	40	110	13	<10	<10	<.2	<50	--	<10	<1000	50	1.6
APR												
18...	--	<50	--	--	<10	--	--	--	--	--	--	--
MAY												
18...	--	1900	--	--	20	--	--	--	--	--	--	--
JUN												
20...	10	30	<10	<10	10	<.2	<50	--	<10	<1000	60	2.4
JUL												
13...	--	350	--	--	<10	--	--	--	--	--	--	--
AUG												
22...	--	130	--	--	10	--	--	--	--	--	--	--
SEP												
20...	10	<50	<10	<10	<10	<.2	<50	--	<10	<1000	40	.2

03484000 WATAUGA RIVER BELOW WILBUR DAM, TN

LOCATION.--Lat 36°20'39", long 82°07'46", Carter County, Hydrologic Unit 06010103, 1,800 ft (500 m) downstream from Wilbur Dam, 0.7 mi (1.1 km) downstream from Big Laurel Branch, 2.7 mi (4.3 km) downstream from Watauga Dam, 5 mi (8 km) east of Elizabethton, and at mile 33.6 (54.1 km).

DRAINAGE AREA.--471 mi^2 (1,220 km^2).

PERIOD OF RECORD.--October 1902 to December 1908 (published as "near Elizabethton"), January 1948 to current year. Prior to May 1903 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1906(M). WSP 1306: 1905(M), Drainage area at "near Elizabethton" site. WSP 1386: 1950.

GAGE.--Water-stage recorder. Datum of gage is 1,550.00 ft (472.440 m) above mean sea level. May 11, 1903, to Dec. 31, 1908, nonrecording gage at railroad bridge 2 mi (3 km) downstream at different datum.

REMARKS.--Records good. Flow completely regulated by Watauga Lake since Dec. 1, 1948 (station 03483500). Low-flow regulated by Wilbur Lake during period of record. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years, 737 ft^3/s (20.87 m^3/s), 21.25 in/yr (540 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,500 ft^3/s (609 m^3/s) Jan. 22, 1906, gage height, 13.6 ft (4.15 m), site and datum then in use, from rating curve extended above 2,500 ft^3/s (70.8 m^3/s); minimum, 2.3 ft^3/s (0.065 m^3/s) July 11, 1953; minimum daily, 2.4 ft^3/s (0.068 m^3/s) Aug. 14, 1949; minimum gage height at present site, 30.73 ft (9.367 m) July 11, 1953. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 6,750 ft^3/s (191 m^3/s) Jan. 19, 1960, gage height, 38.10 ft (11.613 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Aug. 14, 1940, and May 21, 1901, reached stages of about 61 ft (18.6 m) and 58 ft (17.7 m), respectively, present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,970 ft^3/s (112 m^3/s) Feb. 17, gage height, 36.20 ft (11.034 m); minimum, 20 ft^3/s (0.57 m^3/s) Mar. 28-30, gage height, 31.22 ft (9.516 m); minimum daily, 20 ft^3/s (0.57 m^3/s) Mar. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484	1020	650	1900	1400	543	96	61	490	935	160	433
2	288	750	560	610	740	725	55	489	223	343	53	228
3	39	546	120	1420	215	199	55	148	632	63	53	415
4	501	463	58	1600	344	581	1070	54	473	820	82	150
5	650	451	56	2000	502	288	278	885	1210	1460	427	120
6	623	41	780	1800	1270	87	437	1330	1120	1760	47	591
7	900	40	1350	1400	1560	363	414	1350	871	1800	82	821
8	920	529	1400	1950	1020	517	54	58	438	1390	471	951
9	940	307	1850	480	464	212	55	1000	604	1440	305	1590
10	58	400	1700	2300	333	124	54	720	1200	1170	522	914
11	960	438	1050	2600	695	55	48	1800	1320	1600	356	61
12	1150	404	980	2500	865	138	643	859	183	1430	268	70
13	1150	578	2250	1950	225	174	1190	375	1130	2020	308	48
14	1250	549	1800	330	634	151	1440	537	331	1850	357	49
15	740	550	697	580	1660	100	1300	663	608	1670	1610	48
16	260	952	792	1540	1210	239	59	1190	1290	315	764	672
17	280	884	838	2900	1530	1420	197	1430	1150	331	635	861
18	2400	660	47	1260	201	1140	1570	1620	1400	1240	842	62
19	2950	95	46	1300	561	1840	1670	1420	65	1150	533	851
20	1950	41	1620	900	605	190	1570	1500	1490	961	60	874
21	2600	41	2230	1520	1450	634	1640	1480	1460	929	52	905
22	1750	610	1300	700	367	1690	1920	215	1190	480	579	1070
23	58	940	560	56	514	1590	841	600	1370	61	64	331
24	58	600	620	460	794	975	58	440	1240	173	463	259
25	1650	120	56	1220	52	183	646	56	1380	1120	454	52
26	1650	150	56	410	106	24	773	162	714	731	396	419
27	1400	58	56	550	564	22	950	56	1750	894	57	1210
28	1320	980	150	1800	506	21	898	56	1610	316	55	182
29	577	1950	1150	2200	---	20	850	56	1470	409	891	58
30	536	2050	320	410	---	300	773	56	1680	833	552	54
31	314	---	1450	980	---	26	---	1300	---	112	796	---
TOTAL	30406	17197	26592	41626	20387	14571	21604	21966	30092	29806	12294	14349
MEAN	981	573	858	1343	728	470	720	709	1003	961	397	478
MAX	2950	2050	2250	2900	1660	1840	1920	1800	1750	2020	1610	1590
MIN	39	40	46	56	52	20	48	54	65	61	47	48
(†)	-3300	-4700	+4100	-26000	+6400	+35800	+27800	-1200	-6400	-14300	-100	+2800
MEAN‡	874	417	990	504	957	1620	1650	670	790	500	393	572
CFSM‡	1.86	.89	2.10	1.07	2.03	3.44	3.50	1.42	1.68	1.06	.83	1.21
IN.‡	2.14	.99	2.42	1.23	2.12	3.98	3.90	1.64	1.87	1.22	.96	1.35

CAL YR 1976 TOTAL 259737 MEAN 710 MAX 2950 MIN 21 MEAN‡ 729 CFSM‡ 1.55 IN.‡ 21.05
WTR YR 1977 TOTAL 280890 MEAN 770 MAX 2950 MIN 20 MEAN‡ 827 CFSM‡ 1.76 IN.‡ 23.83

† Change in contents, in cfs-days, in Watauga Lake, furnished by Tennessee Valley Authority.
‡ Adjusted for change in contents in lakes or reservoirs listed above.

NOTE.--No gage-height record Dec. 31 to Feb. 2.

03485500 DOE RIVER AT ELIZABETHTON, TN

LOCATION.--Lat 36°20'40", long 82°12'37", Carter County, Hydrologic Unit 06010103, on left bank 1,500 ft (500 m) upstream from bridge on State Highway 91 at Elizabethton, and at mile 1.0 (1.6 km).

DRAINAGE AREA.--137 mi^2 (355 km^2).

PERIOD OF RECORD.--June 1907 to June 1908 (gage heights only), October 1911 to September 1916, October 1920 to current year. Published as "at Valley Forge" 1911-16, 1920-31. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1913(M), 1915(M), 1929(M), 1931(M), Drainage area at "at Valley Forge" site. WSP 1336: 1933(M), 1938. WSP 1910: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,524.73 ft (464.738 m) above mean sea level. See WSP 1910 for history of changes prior to Feb. 1, 1934.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--62 years (water years 1912-16, 1921-77), 223 ft^3/s (6.315 m^3/s), 22.10 in/yr (561 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,940 ft^3/s (225 m^3/s) Mar. 26, 1965, gage height, 7.35 ft (2.240 m); minimum, 17 ft^3/s (0.48 m^3/s) Aug. 31, Sept. 7, 1925; minimum gage height, 0.18 ft (0.055 m) June 22, 1970 (result of construction upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901 reached a stage of 10.5 ft (3.20 m), discharge, 25,000 ft^3/s (708 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 9	1030	2200	62.3	3.91	1.192	Apr. 5	0330	*6320	179	6.56	1.999
Mar. 13	0645	2860	81.0	4.45	1.356	Sept. 8	0930	1930	54.7	3.66	1.116

Minimum discharge, 71 ft^3/s (2.01 m^3/s) Aug. 8, 9, gage height, 0.66 ft (0.201 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	177	203	239	125	448	535	286	286	338	85	111
2	414	161	146	229	123	361	426	262	188	428	93	92
3	289	154	168	248	131	314	917	253	151	302	85	90
4	221	149	155	227	144	346	1040	332	134	247	86	139
5	183	141	147	217	145	375	3580	296	124	215	81	91
6	161	134	142	205	113	605	1240	272	205	181	75	106
7	185	130	477	241	112	595	774	258	288	166	78	109
8	448	125	408	201	110	471	574	269	180	152	74	1040
9	1380	118	320	236	121	391	459	229	169	139	115	406
10	742	121	304	312	129	344	403	213	149	137	83	250
11	426	117	300	215	143	322	351	202	130	142	122	224
12	310	129	516	206	166	395	315	191	157	181	86	169
13	253	114	779	203	289	1650	294	181	135	180	81	143
14	221	111	531	239	259	883	277	173	236	132	92	134
15	195	121	541	315	271	588	258	162	180	119	106	125
16	179	125	543	250	220	470	242	152	150	109	89	134
17	188	114	460	184	183	387	229	145	163	115	205	244
18	176	109	383	190	177	353	215	139	248	110	537	173
19	157	107	329	180	183	315	234	136	188	128	185	148
20	158	105	356	185	220	425	260	147	301	107	131	191
21	166	105	377	174	194	354	213	154	295	103	108	143
22	147	103	308	151	200	421	200	134	253	102	145	125
23	129	95	306	166	251	372	226	136	571	115	104	115
24	130	97	266	169	931	342	335	128	487	92	153	108
25	177	100	251	158	796	311	257	138	671	107	151	100
26	326	99	278	156	611	283	231	258	760	188	109	118
27	236	127	236	153	742	262	218	177	649	112	99	131
28	205	133	229	126	622	249	205	176	484	95	95	114
29	186	374	229	102	---	241	425	187	359	92	89	98
30	175	264	201	132	---	815	321	162	298	109	84	93
31	194	---	320	125	---	775	---	161	---	92	109	---
TOTAL	8839	4059	10259	6134	7711	14463	15254	6109	8589	4835	3735	5264
MEAN	285	135	331	198	275	467	508	197	286	156	120	175
MAX	1380	374	779	315	931	1650	3580	332	760	428	537	1040
MIN	129	95	142	102	110	241	200	128	124	92	74	90
CFSM	2.08	.99	2.42	1.45	2.01	3.41	3.71	1.44	2.09	1.14	.88	1.28
IN.	2.40	1.10	2.79	1.67	2.09	3.93	4.14	1.66	2.33	1.31	1.01	1.43

CAL YR 1976 TOTAL 79606 MEAN 218 MAX 1380 MIN 53 CFSM 1.59 IN 21.62
WTR YR 1977 TOTAL 95251 MEAN 261 MAX 3580 MIN 74 CFSM 1.91 IN 25.86

03486000 WATAUGA RIVER AT ELIZABETHTON, TN

LOCATION.--Lat 36°21'21", long 82°12'26", Carter County, Hydrologic Unit 06010103, on left bank 25 ft (8 m) upstream from bridge on U. S. Highway 19E at Elizabethton, 0.6 mi (1.0 km) downstream from Doe River, and at mile 25.9 (41.7 km).

DRAINAGE AREA.--692 mi^2 (1,792 km^2).

PERIOD OF RECORD.--October 1925 to July 1949, July 1953 to current year. Monthly discharge only prior to February 1926, published in WSP 1306. Gage-height records collected in this vicinity December 1909 to July 1949 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 758: 1932(M). WSP 823: Drainage area. WSP 1336: 1927-28(M), 1930, 1931-32(m).

GAGE.--Water-stage recorder. Datum of gage is 1,486.23 ft (453.003 m) above mean sea level. Feb. 21 to Oct. 4, 1926, nonrecording gage on former Southern Railway bridge 10 ft (3 m) upstream at same datum.

REMARKS.--Records good. Flow partly regulated by Watauga Lake 10.8 mi (17.4 km) upstream since Dec. 1, 1948 (station 03483500). Low-flow regulated by Wilbur Lake 8.1 mi (13.0 km) upstream during period of record. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--47 years (water years 1926-48, 1954-77), 1,086 ft^3/s (30.76 m^3/s), 21.31 in/yr (541 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,100 ft^3/s (2,130 m^3/s) Aug. 14, 1940, gage height, 20.87 ft (6.361 m), from rating curve extended above 29,000 ft^3/s (821 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 42 ft^3/s (1.19 m^3/s) Sept. 20, 1932; minimum daily, 85 ft^3/s (2.41 m^3/s) Dec. 3, 1953; minimum gage height, 1.54 ft (0.469 m) Sept. 20, 1932. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 14,500 ft^3/s (411 m^3/s) Mar. 12, 1963; gage height, 10.70 ft (3.261 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of about 21 ft (6.4 m), discharge, 76,000 ft^3/s (2,150 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,000 ft^3/s (312 m^3/s) Apr. 5, gage height, 9.71 ft (2.960 m); minimum, 123 ft^3/s (3.48 m^3/s) Aug. 7, gage height, 2.00 ft (0.610 m); minimum daily, 153 ft^3/s (4.33 m^3/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	1030	1430	2300	1600	1200	980	651	1050	1680	313	468
2	875	1100	429	1000	950	1250	730	835	633	920	176	424
3	447	820	815	1800	238	767	1390	494	922	579	167	469
4	577	628	263	2000	599	879	2830	487	640	1120	193	322
5	952	680	248	2290	619	966	6750	1160	1070	1500	509	237
6	808	275	894	2350	1410	818	2450	1540	1920	2000	164	590
7	1250	220	873	1660	1710	882	1620	1810	1310	2000	153	874
8	1440	695	1860	2270	2260	1430	968	500	594	1700	396	2090
9	3390	469	2580	966	2790	617	757	1290	862	1460	540	1950
10	1240	333	2310	2800	2790	701	653	780	1300	1390	710	1200
11	1520	729	1520	2900	2750	467	565	2140	1430	1760	513	490
12	1510	575	1580	2800	1250	590	895	1210	561	1630	386	281
13	1580	745	3340	2300	657	2100	1580	547	1150	2230	301	230
14	1720	644	2760	700	903	1440	1800	728	698	2010	377	215
15	1250	732	1730	1100	2010	890	1800	842	714	1830	1790	207
16	457	1210	1280	1900	1660	752	473	1650	1380	575	778	798
17	465	845	1820	3200	1750	1770	426	1460	1400	600	1060	1190
18	2260	862	591	1500	787	1730	1730	1710	1640	1340	1420	340
19	3230	431	504	1600	828	2210	1980	1630	482	1080	754	988
20	2270	187	1800	1200	582	1070	1980	1640	1590	1240	264	1070
21	2930	186	2840	1800	1740	1220	1930	1620	1810	1080	196	1040
22	2200	554	1930	950	951	2140	2190	521	1600	626	651	1110
23	306	1120	1080	320	799	2140	1290	715	1850	228	273	644
24	215	912	1320	750	2120	1560	534	579	1770	177	630	350
25	1690	260	403	1400	1250	768	886	290	2390	1160	617	285
26	2470	249	434	660	1010	410	1020	414	1780	1090	488	489
27	2090	210	372	800	1610	376	1220	267	2320	891	208	1160
28	1510	1120	433	2000	1380	356	1120	256	2260	480	174	499
29	936	2000	1240	2400	---	345	1570	274	1940	650	961	247
30	782	2410	939	620	---	1460	1070	250	2000	920	643	179
31	494	---	1610	1200	---	1400	---	1240	---	233	881	---
TOTAL	43954	22231	41228	51536	39003	34704	45187	29530	41066	36179	16686	20436
MEAN	1418	741	1330	1662	1393	1119	1506	953	1369	1167	538	681
MAX	3390	2410	3340	3200	2790	2210	6750	2140	2390	2230	1790	2090
MIN	215	186	248	320	238	345	426	250	482	177	153	179
(†)	-3300	-4700	+4100	-26000	+6400	+35800	+27800	-1200	-6400	-14300	-100	+2800
MEAN‡	1311	584	1462	824	1622	2274	2433	914	1156	706	535	775
CFSM‡	1.89	.84	2.11	1.19	2.34	3.29	3.52	1.32	1.67	1.02	.77	1.12
IN.‡	2.18	.94	2.44	1.37	2.44	3.79	3.92	1.52	1.86	1.18	.89	1.25

CAL YR 1976 TOTAL 384439 MEAN 1050 MAX 3390 MIN 186 MEAN‡ 1069 CFSM‡ 1.54 IN‡ 21.03
WTR YR 1977 TOTAL 421740 MEAN 1155 MAX 6750 MIN 153 MEAN‡ 1213 CFSM‡ 1.75 IN‡ 23.79

† Change in contents, in cfs-days, in Watauga Lake, furnished by Tennessee Valley Authority.
‡ Adjusted for change in contents in lakes or reservoirs listed above.

03486810 SOUTH FORK HOLSTON RIVER AT BOONE DAM (TAILWATER), TN

LOCATION.--Lat 36°26'26", long 82°26'17", Washington County, Hydrologic Unit 06010103, at downstream side of dam, 2.5 mi (4.0 km) northeast of Gray, 3.8 mi (6.1 km) southwest of Holston, 4.0 mi (6.4 km) northwest of Flourville, and at mile 18.6 (29.9 km).

DRAINAGE AREA.--1,840 mi² (4,766 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by Boone Lake (station 03486800), Watauga Lake (station 03483500), and South Holston Lake (station 03476000) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
18...	0900	12000	200	6.5	15.0	7	1	5.2	6	--	--	24
20...	1120	9500	--	--	15.0	--	--	--	--	1.0	<10	--
NOV												
15...	0930	3800	200	6.4	11.0	2	<1	--	4	--	--	22
DEC												
13...	0830	9800	170	7.4	8.0	5	2	--	3	--	--	20
JAN												
17...	0845	11800	160	7.4	4.0	5	12	9.9	2	--	--	23
FEB												
15...	0800	--	230	7.8	5.0	5	3	11.3	4	--	--	23
MAR												
14...	0830	5830	160	7.6	7.0	2	3	9.4	4	--	--	20
APR												
18...	0900	10400	160	7.6	11.0	15	40	7.2	6	--	--	--
MAY												
16...	1245	3500	200	7.1	12.0	6	4	7.5	2	--	--	--
JUN												
14...	1130	4100	190	7.3	13.0	3	1	6.3	15	--	--	--
JUL												
18...	1120	3200	160	7.1	14.0	5	2	5.1	4	--	--	--
AUG												
15...	0930	4200	170	7.0	15.0	5	2	6.1	2	--	--	--
SEP												
19...	1320	3200	180	7.3	16.0	5	5	4.8	12	--	--	29

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
18...	6.0	3.6	2.0	98	80	14	5.0	<.1	5.0	100	.14	3240
20...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	6.4	4.0	1.1	95	78	11	5.0	<.1	4.8	100	.14	1030
DEC												
13...	6.1	5.5	1.0	88	72	16	6.0	.1	4.3	50	.07	1320
JAN												
17...	6.1	3.3	1.3	74	61	12	4.0	<.1	4.9	90	.12	2870
FEB												
15...	6.2	4.0	1.6	93	76	--	8.0	<.1	--	110	.15	--
MAR												
14...	5.0	3.0	1.2	80	66	13	4.0	<.1	--	90	.12	1420
APR												
18...	--	--	--	84	69	--	--	--	--	--	--	--
MAY												
16...	--	--	--	94	77	--	--	--	--	--	--	--
JUN												
14...	--	--	--	95	78	10	5.0	<.1	--	110	.15	1220
JUL												
18...	--	--	--	73	60	--	--	--	--	--	--	--
AUG												
15...	--	--	--	80	66	--	--	--	--	--	--	--
SEP												
19...	7.0	3.5	1.5	88	72	9.0	5.0	<.1	--	100	.14	864

03486810 SOUTH FORK HOLSTON RIVER AT BOONE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
OCT												
18...	5	.54	.10	.13	.05	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	3	.58	.06	.09	.03	--	--	--	--	--	--	--
DEC												
13...	6	.52	.13	.07	.04	200	<2	<100	<10	60	<1	<5
JAN												
17...	7	.52	.10	.07	.03	--	--	--	--	--	--	--
FEB												
15...	1	.62	.13	.03	.03	--	--	--	--	--	--	--
MAR												
14...	2	.52	.17	.07	.04	<200	--	<100	<10	--	<1	--
APR												
18...	--	.78	.11	.14	.05	--	--	--	--	--	--	--
MAY												
16...	--	.71	.05	.07	.03	--	--	--	--	--	--	--
JUN												
14...	1	.72	.02	.10	.03	--	--	--	--	--	--	--
JUL												
18...	--	.65	.03	.05	.02	--	--	--	--	--	--	--
AUG												
15...	--	.67	.06	.05	.02	--	--	--	--	--	--	--
SEP												
19...	5	.66	.09	.13	.03	<200	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
18...	--	380	--	--	40	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	--	30	--	--	180	--	--	--	--	--	--	--
DEC												
13...	20	20	<10	<10	240	.2	<50	1	<10	<1000	20	1.7
JAN												
17...	--	180	--	--	30	--	--	--	--	--	--	--
FEB												
15...	--	770	--	--	1100	--	--	--	--	--	--	--
MAR												
14...	40	160	22	<10	30	<.2	<50	--	<10	<1000	30	1.4
APR												
18...	--	1500	--	--	20	--	--	--	--	--	--	--
MAY												
16...	--	170	--	--	<10	--	--	--	--	--	--	--
JUN												
14...	--	--	--	--	--	--	--	--	--	--	--	1.2
JUL												
18...	--	190	--	--	50	--	--	--	--	--	--	--
AUG												
15...	--	170	--	--	20	--	--	--	--	--	--	--
SEP												
19...	20	110	<10	<10	30	<.2	<50	--	<10	<1000	10	1.3

03487010 SOUTH FORK HOLSTON RIVER AT FORT PATRICK HENRY DAM (TAILWATER), TN

LOCATION.--Lat 36°29'53", long 82°30'33", Sullivan County, Hydrologic Unit 06010102, on downstream side of Ft. Patrick Henry Dam, 3.1 mi (5.0 km) northeast of Vernon Heights, 3.1 mi (5.0 km) northwest of Fordtown, 4.9 mi (7.9 km) northeast of Sullivan Gardens, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--1,903 mi^2 (4,929 km^2), at Fort Patrick Henry Dam.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by four reservoirs above site (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
19...	0830	7000	170	6.5	16.0	9	3	4.5	5	--	--	21
20...	0905	8924	--	--	15.5	--	--	--	--	1.4	10	--
NOV												
15...	0815	4000	200	6.7	10.0	7	<1	6.9	5	--	--	23
DEC												
13...	1215	9900	190	7.6	8.0	2	3	7.2	4	--	--	24
JAN												
17...	0830	8860	190	7.4	4.0	5	6	8.9	2	--	--	--
FEB												
15...	0930	5600	240	7.6	4.0	6	3	10.8	8	--	--	24
MAR												
14...	0830	3200	180	7.8	6.0	6	4	--	2	--	--	28
APR												
19...	0830	3200	160	7.6	12.5	15	32	7.2	1	--	--	--
MAY												
11...	0945	9600	160	7.1	13.0	8	8	--	3	--	--	--
JUN												
14...	0830	3200	200	7.7	14.0	3	2	5.6	3	--	--	28
JUL												
19...	0900	3114	160	7.1	11.0	5	3	5.2	4	--	--	--
AUG												
15...	1030	9200	170	7.4	12.0	7	11	4.6	4	--	--	--
SEP												
14...	0845	3400	180	7.6	17.0	6	9	3.5	2	--	--	25

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
19...	5.3	4.3	1.8	78	64	15	5.0	<.1	5.6	80	.11	1510
20...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	6.3	4.3	1.1	105	86	14	6.0	<.1	4.9	90	.12	972
DEC												
13...	6.5	5.4	1.2	98	80	14	6.0	.1	4.3	120	.16	3210
JAN												
17...	--	3.3	1.3	100	82	2.0	4.0	<.1	3.9	110	.15	2630
FEB												
15...	6.5	3.7	1.6	100	82	--	7.0	<.1	--	110	.15	1660
MAR												
14...	6.7	4.0	1.4	90	74	17	3.0	<.1	--	110	.15	950
APR												
19...	--	--	--	88	72	--	--	--	--	--	--	--
MAY												
11...	--	--	--	98	80	--	--	--	--	--	--	--
JUN												
14...	6.4	4.4	1.7	96	79	14	6.0	<.1	--	120	.16	1040
JUL												
19...	--	--	--	71	58	--	--	--	--	--	--	--
AUG												
15...	--	--	--	95	78	--	--	--	--	--	--	--
SEP												
14...	6.3	3.6	1.5	88	72	11	4.0	.1	--	100	.14	918

03487010 SOUTH FORK HOLSTON RIVER AT FORT PATRICK HENRY DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT												
19...	15	.59	.05	.19	.05	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	4	.57	.04	.10	.04	--	--	--	--	--	--	--
DEC												
13...	8	.57	.08	.15	.04	300	<2	<100	<10	1000	<1	<5
JAN												
17...	17	.58	.08	.24	.03	--	--	--	--	--	--	--
FEB												
15...	--	.65	.12	.02	.03	--	--	--	--	--	--	--
MAR												
14...	2	.58	.10	.09	.04	200	--	<100	<10	--	<1	--
APR												
19...	--	.83	.09	.09	.05	--	--	--	--	--	--	--
MAY												
11...	--	.72	.07	.21	.03	--	--	--	--	--	--	--
JUN												
14...	1	.68	<.01	.11	.02	300	--	<100	<10	--	<1	--
JUL												
19...	--	.59	.02	.17	.02	--	--	--	--	--	--	--
AUG												
15...	--	.57	.06	.20	.02	--	--	--	--	--	--	--
SEP												
14...	11	.71	.03	.12	.03	500	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
19...	--	360	--	--	80	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
15...	--	210	--	--	10	--	--	--	--	--	--	--
DEC												
13...	<10	370	<10	<10	20	.3	<50	1	<10	<1000	<10	2.1
JAN												
17...	--	170	--	--	20	--	--	--	--	--	--	--
FEB												
15...	--	820	--	--	50	--	--	--	--	--	--	--
MAR												
14...	10	210	16	<10	40	<.2	<50	--	<10	<1000	40	1.2
APR												
19...	--	1500	--	--	50	--	--	--	--	--	--	--
MAY												
11...	--	400	--	--	40	--	--	--	--	--	--	--
JUN												
14...	<10	260	<10	<10	50	<.8	<50	--	<10	<1000	20	2.1
JUL												
19...	--	280	--	--	50	--	--	--	--	--	--	--
AUG												
15...	--	350	--	--	70	--	--	--	--	--	--	--
SEP												
14...	20	230	<10	<10	80	<.2	<50	--	<10	<1000	60	1.1

03487500 SOUTH FORK HOLSTON RIVER AT KINGSPORT, TN

LOCATION.--Lat 36°31'51", long 82°33'29", Sullivan County, Hydrologic Unit 06010102, on left bank of main channel on Long Island, 1,000 ft (300 m) downstream from bridge on State Highway 93 BR, at Kingsport, 1.2 mi (1.9 km) upstream from Reedy Creek, 4.5 mi (7.2 km) downstream from Fort Patrick Henry Dam, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--1,935 mi^2 (5,012 km^2).

PERIOD OF RECORD.--September 1925 to September 1977 (discontinued). Separate record (unpublished) for sluice channel beginning October 1960. Separate record (unpublished) for main channel for period October 1960 to September 1965; separate record for main channel published since October 1965.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1033. 1930(M). WSP 1306: 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 1,175.84 ft (358.396 m) above mean sea level. Prior to Dec. 2, 1953, water-stage recorder at site 2 mi (3 km) upstream at datum 8.47 ft (2.582 m) higher. Since May 1, 1954, supplementary water-stage recorder on downstream side of bridge over sluice channel, 2,000 ft (600 m) south of main gage at datum 0.39 ft (0.119 m) lower.

REMARKS.--Records fair. Daily and maximum instantaneous discharge figures were obtained by adding discharges of main channel and sluice channel as determined from separate stage-discharge relations. Flow regulated by four reservoirs (see p. 390). Some diversion upstream by the city of Kingsport, Tennessee Eastman Corporation, and Holston Ordnance Works, Area A.

AVERAGE DISCHARGE.--52 years, 2,610 ft^3/s (73.92 m^3/s), 18.32 in/yr (465 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,800 ft^3/s (1,950 m^3/s) Aug. 14, 1940, gage height, 18.80 ft (5.730 m), site and datum then in use; minimum, 210 ft^3/s (5.95 m^3/s) Jan. 28, 1940, gage height, -0.20 ft (-0.061 m), site and datum then in use; minimum daily, 301 ft^3/s (8.52 m^3/s) June 13, 1954. Maximum discharge since closure of Fort Patrick Henry Dam on Oct. 27, 1953, 24,200 ft^3/s (685 m^3/s) Mar. 12, 1963, gage height, 9.01 ft (2.746 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,200 ft^3/s (317 m^3/s) Apr. 4; minimum daily, 735 ft^3/s (20.8 m^3/s) Feb. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2750	4360	3750	6690	3890	1790	878	3230	2400	4440	1950	2550
2	842	3780	1730	5430	2990	1160	888	1280	2420	3510	1580	3430
3	831	2990	1960	4720	1110	776	1030	2050	3540	742	2590	3510
4	2680	3030	1450	7570	1400	2000	5140	1560	3280	758	1760	1330
5	2730	2710	824	3530	2260	1940	9100	3880	756	3060	1800	1580
6	1880	2230	3000	4470	2660	807	8240	5040	5500	4390	967	3730
7	4330	857	1360	3900	3740	1760	4020	3300	3120	4250	1770	3180
8	4080	3840	6970	6520	2830	1750	3530	914	2030	3550	1930	3230
9	4490	3770	7610	4180	2340	925	4760	5150	1450	3130	3020	3750
10	4350	2240	7250	7970	2520	796	4920	6310	1990	3370	3440	2970
11	3010	2850	4370	7030	2230	816	2470	3890	2730	3260	3220	2050
12	3710	2610	3710	5320	2090	1020	3740	1850	1300	3770	2070	2490
13	4400	2810	6430	4910	2180	1020	4250	903	4570	4570	1490	3290
14	3840	1720	6380	1440	3050	858	5120	826	1390	4580	1390	2960
15	4570	1540	3820	1470	3930	858	5220	879	1900	4980	2980	3080
16	2750	2470	4330	4700	4220	1280	1360	2070	5240	2430	3880	4250
17	1350	2660	4290	7170	5090	4060	3110	3810	2540	1360	3190	2990
18	5610	2690	1390	6730	1850	4510	5690	4290	798	3290	2460	2810
19	6460	1450	846	5420	2240	4840	2590	4140	746	3870	1680	2370
20	5340	1240	4150	3320	1040	1490	2200	2830	2690	2750	798	3500
21	6110	1370	6570	4750	3590	3390	2820	2600	2590	2690	840	4390
22	4650	4790	5290	3700	1300	6010	3840	3520	2600	782	1880	3250
23	1200	2600	2100	1790	1260	5580	3310	4320	2840	782	2680	3540
24	1180	1770	3910	1440	1810	4430	928	1830	3630	2320	2130	2930
25	3260	798	1110	3400	735	1810	1440	807	3390	2170	2200	2420
26	4100	797	786	4250	1040	1240	3220	990	1730	1810	2550	2030
27	4380	1080	891	1830	1700	1200	3830	2100	4170	1980	1490	2440
28	5820	1660	1100	5450	1560	967	1900	848	4220	980	2470	3900
29	3460	3680	3200	6290	---	826	1510	2080	5310	2300	2980	3400
30	3920	7750	3720	994	---	1630	2780	1850	3980	2980	3160	2310
31	3310	---	5950	2600	---	1620	---	3860	---	1160	3390	---
TOTAL	111393	78142	110247	138984	66655	63159	103834	83007	84850	86014	69735	89660
MEAN	3593	2605	3556	4483	2381	2037	3461	2678	2828	2775	2250	2989
MAX	6460	7750	7610	7970	5090	6010	9100	6310	5500	4980	3880	4390
MIN	831	797	786	994	735	776	878	807	746	742	798	1330

CAL YR 1976 TOTAL 876117 MEAN 2394 MAX 9070 MIN 771 MEAN‡ 2506 CFSM‡ 1.30 IN.‡ 17.62
WTR YR 1977 TOTAL 1085680 MEAN 2974 MAX 9100 MIN 735 MEAN‡ 2899 CFSM‡ 1.50 IN.‡ 20.34

‡ Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry Lakes.

03487500 SOUTH FORK HOLSTON RIVER AT KINGSPORT, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, IN MAIN CHANNEL ONLY,
WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2520	3710	3260	5590	3460	1670	864	2950	2260	3780	1870	2270
2	828	3270	1610	4590	2620	1140	875	1250	2310	3050	1530	3050
3	819	2680	1840	4060	1090	761	963	1920	3150	726	2300	3080
4	2480	2770	1400	6330	1310	1890	4040	1510	2930	743	1620	1290
5	2520	2480	812	3150	2080	1780	6800	3460	741	2730	1700	1470
6	1810	2000	2710	3940	2380	792	6770	4320	4780	3800	953	3270
7	3780	845	1320	3390	3260	1650	3570	3000	2790	3680	1730	2830
8	3560	3280	5880	5480	2510	1590	3180	897	1910	3110	1860	2850
9	3850	3220	6310	3650	2110	908	4140	4410	1350	2830	2880	3250
10	3800	2080	6060	6590	2280	782	4280	5370	1870	2970	3000	2650
11	2700	2650	3800	5840	2080	802	2310	3400	2540	2920	2820	1960
12	3250	2420	3290	4510	1910	997	3220	1760	1210	3280	1990	2270
13	3710	2520	5440	4200	1960	908	3710	886	4000	3920	1450	2860
14	3380	1640	5410	1380	2720	844	4350	812	1300	3970	1360	2570
15	3900	1480	3460	1400	3440	844	4430	864	1780	4270	2760	2680
16	2480	2250	3750	4020	3650	1240	1300	1970	4610	2290	3410	3640
17	1280	2380	3710	5930	4370	3520	2770	3420	2460	1320	2890	2650
18	4660	2380	1360	5610	1700	3920	4780	3790	782	2880	2210	2450
19	5310	1410	833	4610	2020	4160	2340	3690	731	3350	1560	2140
20	4470	1210	3610	2950	1010	1400	2080	2640	2490	2440	785	3030
21	5120	1330	5570	4120	3160	3020	2510	2440	2300	2360	827	3760
22	3990	3940	4510	3330	1240	5060	3420	3180	2300	768	1780	2800
23	1140	2310	1910	1710	1240	4720	2950	3840	2520	768	2450	3050
24	1160	1620	3500	1390	1680	3840	908	1760	3140	2130	2020	2570
25	2880	785	1090	3020	721	1680	1350	792	2940	2050	2040	2140
26	3560	785	771	3750	1010	1210	2880	974	1670	1740	2310	1910
27	3760	1060	875	1710	1610	1150	3390	2030	3560	1870	1460	2170
28	4880	1590	1070	4700	1480	952	1780	833	3630	962	2270	3300
29	3030	3240	2840	5280	---	812	1470	1990	4470	2170	2670	2880
30	3330	6420	3270	963	---	1420	2570	1810	3430	2680	2850	2170
31	2890	---	5040	2380	---	1380	---	3420	---	1140	3050	---
TOTAL	96847	69755	96311	119573	60101	56842	90000	75388	75954	76697	64405	79010
MEAN	3124	2325	3107	3857	2146	1834	3000	2432	2532	2474	2078	2634
MAX	5310	6420	6310	6590	4370	5060	6800	5370	4780	4270	3410	3760
MIN	819	785	771	963	721	761	864	792	731	726	785	1290

CAL YR 1976 TOTAL 786918 MEAN 2150 MAX 7470 MIN 759
WTR YR 1977 TOTAL 960883 MEAN 2633 MAX 6800 MIN 721

03487550 REEDY CREEK AT OREBANK, TN

LOCATION.--Lat 36°33'42", long 82°27'36", Sullivan County, Hydrologic Unit 06010102, on left bank, 50 ft (15 m) upstream from Anderson Bridge, 0.1 mi (0.2 km) south of U. S. Highway 11W, 0.3 mi (0.5 km) north of Orebank, 1.0 mi (1.6 km) upstream from Gaines Branch, and at mile 9.8 (15.8 km).

DRAINAGE AREA.--36.3 mi^2 (94.0 km^2).

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD Tn. 1973: 1971(P), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 1,232.61 ft (375.700 m) above mean sea level. Prior to Mar. 4, 1975, at site 50 ft (15 m) downstream at same datum.

REMARKS.--Records good. The Bloomingdale Utility District diverts an average of about 0.6 ft^3/s (0.017 m^3/s) for water supply, 0.8 mi (1.3 km) upstream from the gage. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--14 years, 46.1 ft^3/s (1.306 m^3/s), 17.25 in/yr (438 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,930 ft^3/s (83.0 m^3/s) Mar. 30, 1975, from rating curve extended above 1,300 ft^3/s (36.8 m^3/s); maximum gage height, 9.43 ft (2.874 m) Apr. 5, 1977; minimum, 3.0 ft^3/s (0.085 m^3/s) Jan. 20, 1966, gage height, 1.30 ft (0.396 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1927, reached a stage of 11.4 ft (3.47 m), discharge, about 11,000 ft^3/s (312 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft^3/s (64.6 m^3/s) at 0330 hours, Apr. 5, gage height, 9.43 ft (2.874 m), no other peak above base of 750 ft^3/s (21.2 m^3/s); minimum, 6.0 ft^3/s (0.17 m^3/s) Aug. 8, gage height, 1.10 ft (0.335 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	28	35	77	26	45	89	35	19	55	8.6	8.6
2	17	24	29	53	25	39	72	33	14	61	7.8	8.2
3	12	22	25	46	19	36	164	30	14	33	7.4	7.8
4	10	20	23	41	24	38	920	31	12	24	7.4	7.4
5	9.1	19	21	40	27	38	1140	29	12	20	7.1	7.4
6	8.6	17	22	37	21	44	287	28	14	18	6.7	7.4
7	14	16	125	37	17	47	165	28	16	16	6.7	8.5
8	57	15	86	31	17	41	128	26	12	14	9.7	12
9	188	15	57	43	17	37	104	23	14	13	33	8.6
10	64	14	46	68	18	34	90	22	13	13	58	8.6
11	36	14	41	51	23	32	80	21	12	13	32	8.6
12	26	21	83	40	26	36	71	20	13	12	16	7.4
13	22	18	83	36	37	177	65	20	12	12	12	7.4
14	20	17	61	40	34	91	61	20	12	11	22	7.8
15	17	17	54	53	44	67	57	19	12	11	18	9.0
16	17	16	50	53	36	55	53	18	12	10	13	11
17	17	15	44	46	27	47	49	18	12	9.7	31	20
18	16	15	37	43	27	43	46	17	15	9.4	42	10
19	15	14	32	40	26	39	44	17	16	9.4	21	9.0
20	14	13	53	36	27	58	41	16	12	9.0	16	8.6
21	15	13	64	33	25	51	37	16	11	8.6	13	7.4
22	13	12	49	30	23	55	35	15	12	8.2	12	7.1
23	12	11	44	28	25	53	38	15	24	8.2	10	6.7
24	13	11	37	26	58	48	44	15	44	7.4	28	6.7
25	108	11	34	26	56	42	35	14	36	12	18	6.7
26	135	10	34	24	46	38	33	15	24	12	13	7.4
27	60	12	31	24	51	36	30	15	20	9.0	11	8.6
28	38	15	32	24	54	35	30	15	34	8.6	11	9.4
29	29	87	36	22	---	34	71	14	39	9.7	10	7.4
30	28	47	31	24	---	173	41	35	25	12	9.4	7.1
31	32	---	122	25	---	133	---	17	---	8.6	9.0	---
TOTAL	1084.7	579	1521	1197	856	1742	4120	657	537	477.8	519.8	257.8
MEAN	35.0	19.3	49.1	38.6	30.6	56.2	137	21.2	17.9	15.4	16.8	8.59
MAX	188	87	125	77	58	177	1140	35	44	61	58	20
MIN	8.6	10	21	22	17	32	30	14	11	7.4	6.7	6.7
CFSM	.96	.53	1.35	1.06	.84	1.55	3.77	.58	.49	.42	.46	.24
IN.	1.11	.59	1.56	1.23	.88	1.79	4.22	.67	.55	.49	.53	.26

CAL YR 1976 TOTAL 14226.9 MEAN 38.9 MAX 496 MIN 5.0 CFSM 1.07 IN 14.58
WTR YR 1977 TOTAL 13549.1 MEAN 37.1 MAX 1140 MIN 6.7 CFSM 1.02 IN 13.88

03490350 HOLSTON RIVER AT CHURCH HILL, TN

LOCATION.--Lat 36°31'00", long 82°43'24", Hawkins County, Hydrologic Unit 06010104, at county road bridge, 0.4 mi (0.6 km) downstream from Alexander Creek, 0.8 mi (1.3 km) southwest of Church Hill, 3.1 mi (5.0 km) southwest of Block City, and at mile 131.5 (211.6 km).

DRAINAGE AREA.--2,819 mi^2 (7,301 km^2).

PERIOD OF RECORD.--Water years 1974 to current year.

REMARKS.--Flow regulated by four reservoirs above site (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMPLING DEPTH (FT)	CROSS SECTION LOCATION (% FROM R BANK)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)
OCT											
13...	1150	1.0	25	2100	240	7.7	15.6	10	5	8.6	12
13...	1155	1.0	75	2100	240	7.8	15.6	7	5	8.7	9
13...	1830	1.0	50	8470	--	--	17.5	--	--	--	--
NOV											
10...	1405	1.0	25	4300	290	7.6	13.9	15	3	8.7	16
10...	1525	1.0	75	4300	310	7.9	13.3	10	2	10.3	12
DEC											
08...	1115	1.0	25	13200	240	5.6	6.7	10	26	10.8	9
08...	1130	1.0	75	13200	270	6.7	5.6	7	23	10.7	7
FEB											
14...	1445	1.0	25	3620	320	8.5	4.4	10	3	15.0	7
14...	1505	1.0	75	3260	400	8.4	3.9	12	3	15.5	9
MAR											
14...	1430	1.0	25	5990	250	8.0	12.8	16	34	9.0	--
14...	1525	1.0	75	5870	240	7.9	12.2	14	30	9.2	--
APR											
12...	1300	1.0	25	2620	270	7.9	15.6	10	7	10.0	--
12...	1340	1.0	75	2560	310	8.0	16.7	9	6	10.1	--
MAY											
11...	1317	1.0	25	9240	270	8.0	15.0	10	12	10.2	15
11...	1335	1.0	75	9200	310	8.0	16.7	13	14	9.9	8
JUN											
14...	1257	1.0	25	1510	230	8.2	18.3	8	1	10.8	--
14...	1310	1.0	75	1510	230	8.1	18.3	10	2	10.8	--
JUL											
12...	1330	1.0	25	--	190	8.2	22.2	12	<1	11.6	--
12...	1405	1.0	75	--	200	8.6	22.2	8	1	12.5	--
AUG											
23...	1345	1.0	25	--	220	8.1	22.8	6	1	10.4	7
23...	1352	1.0	75	--	240	8.0	22.8	5	1	10.9	6
SEP											
06...	1305	1.0	25	--	240	8.4	23.3	8	1	11.7	--
06...	1345	1.0	75	--	240	8.4	22.2	5	1	11.5	--

03490350 HOLSTON RIVER AT CHURCH HILL, TN--Continued.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	BIO-CHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT											
13...	--	--	--	28	6.4	10	1.8	95	0	78	24
13...	--	--	--	30	6.4	11	1.7	95	0	78	22
13...	1.8	--	230	--	--	--	--	--	--	--	--
NOV											
10...	--	--	--	33	9.1	14	1.8	105	0	86	41
10...	--	--	--	35	9.3	13	1.6	110	0	90	26
DEC											
08...	--	--	--	32	6.8	9.2	1.3	54	0	44	19
08...	--	--	--	34	6.7	12	1.3	87	0	71	17
FEB											
14...	2.6	560	10	37	7.7	18	1.7	101	3	88	20
14...	2.0	580	<10	42	8.6	25	1.6	110	2	94	20
MAR											
14...	2.4	1800	640	--	--	--	--	99	0	81	--
14...	1.7	>2000	980	--	--	--	--	93	0	76	--
APR											
12...	1.1	1020	180	--	--	--	--	113	0	93	--
12...	1.2	480	160	--	--	--	--	122	0	100	--
MAY											
11...	1.9	800	120	32	7.8	13	1.8	109	0	89	23
11...	1.9	830	160	29	8.0	17	1.8	106	0	87	23
JUN											
14...	1.4	1000	<100	--	--	--	--	98	0	80	--
14...	1.5	3200	<100	--	--	--	--	98	0	80	--
JUL											
12...	1.7	9400	200	--	--	--	--	82	0	67	--
12...	1.3	300	<100	--	--	--	--	71	6	68	--
AUG											
23...	2.1	200	<100	25	6.0	8.3	1.8	95	0	78	16
23...	2.1	200	<100	27	6.1	10	1.8	82	0	67	16
SEP											
06...	1.1	100	<100	--	--	--	--	89	0	73	--
06...	1.3	7600	<100	--	--	--	--	89	0	73	--

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT											
13...	12	<.1	5.4	130	.18	737	5	.76	.21	.15	.07
13...	14	<.1	5.6	150	.20	850	9	.89	.14	.16	.06
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
10...	15	<.1	5.2	180	.24	2090	15	.56	.47	.46	.11
10...	24	<.1	4.5	180	.24	2090	8	.66	.26	.27	.07
DEC											
08...	14	<.1	4.2	160	.22	5700	26	.63	.09	.20	.10
08...	22	<.1	3.9	250	.34	8910	45	.65	.07	.19	.07
FEB											
14...	32	<.1	3.0	180	.24	1760	2	.67	.11	.13	.05
14...	48	<.1	2.3	220	.30	1940	2	.81	.09	.17	.04
MAR											
14...	--	--	--	--	--	--	--	.71	.19	.19	.09
14...	--	--	--	--	--	--	--	.76	.12	.19	.08
APR											
12...	--	--	--	--	--	--	--	.80	.17	.11	.09
12...	--	--	--	--	--	--	--	1.1	.18	.14	.11
MAY											
11...	18	.1	--	170	.23	4240	19	.64	.23	.15	.09
11...	27	<.1	--	180	.24	4470	20	.60	.13	.13	.07
JUN											
14...	--	--	--	--	--	--	--	.58	.02	.20	.05
14...	--	--	--	--	--	--	--	.62	.06	.17	.06
JUL											
12...	--	--	--	--	--	--	--	.53	.05	.15	.06
12...	--	--	--	--	--	--	--	.54	.05	.15	.06
AUG											
23...	12	.1	--	140	.19	--	3	.57	.05	.15	.10
23...	15	.1	--	140	.19	--	5	.61	.06	.11	.10
SEP											
06...	--	--	--	--	--	--	--	.60	.03	.14	.10
06...	--	--	--	--	--	--	--	.66	.02	.14	.08

03490350 HOLSTON RIVER AT CHURCH HILL, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT											
13...	.05	--	--	--	--	--	--	--	--	210	<50
13...	.05	--	--	--	--	--	--	--	--	250	<50
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
10...	.06	400	<2	<100	<10	60	<1	<5	90	300	<50
10...	.19	400	<2	<100	<10	30	<1	<5	70	190	<50
DEC											
08...	.03	--	--	--	--	--	--	--	--	460	60
08...	.04	--	--	--	--	--	--	--	--	1200	100
FEB											
14...	--	<200	<2	<100	<10	100	<1	<5	80	500	<50
14...	--	300	<2	<100	<10	100	<1	<5	10	230	<50
MAR											
14...	--	--	--	--	--	--	--	--	--	1500	110
14...	--	--	--	--	--	--	--	--	--	1400	140
APR											
12...	--	--	--	--	--	--	--	--	--	220	50
12...	--	--	--	--	--	--	--	--	--	190	<50
MAY											
11...	--	400	<2	<100	<10	180	<1	<5	40	430	<50
11...	--	500	2	<100	<10	80	<1	<5	40	460	<50
JUN											
14...	--	--	--	--	--	--	--	--	--	200	<50
14...	--	--	--	--	--	--	--	--	--	210	<50
JUL											
12...	--	--	--	--	--	--	--	--	--	190	<50
12...	--	--	--	--	--	--	--	--	--	120	<50
AUG											
23...	--	<200	<2	<100	<10	120	<1	<5	<10	80	<50
23...	--	<200	<2	<100	<10	80	<1	<5	10	80	<50
SEP											
06...	--	--	--	--	--	--	--	--	--	70	<50

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT											
13...	--	--	50	40	--	--	--	--	--	--	--
13...	--	--	50	20	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
10...	<10	<10	170	130	<.2	70	<1	<10	<1000	110	3.3
10...	<10	<10	80	50	<.2	80	2	<10	<1000	70	2.7
DEC											
08...	--	--	130	30	--	--	--	--	--	--	--
08...	--	--	90	20	--	--	--	--	--	--	--
FEB											
14...	16	<10	70	50	<.2	<50	<1	<10	<1000	80	2.4
14...	<10	<10	40	20	<.2	<50	3	<10	<1000	20	2.5
MAR											
14...	--	--	160	80	--	--	--	--	--	--	--
14...	--	--	80	60	--	--	--	--	--	--	--
APR											
12...	--	--	60	30	--	--	--	--	--	--	--
12...	--	--	50	30	--	--	--	--	--	--	--
MAY											
11...	<10	<10	90	20	<.2	<50	<1	<10	<1000	20	3.0
11...	<10	<10	90	20	<.2	<50	<1	<10	<1000	50	3.5
JUN											
14...	--	--	20	10	--	--	--	--	--	--	--
14...	--	--	10	10	--	--	--	--	--	--	--
JUL											
12...	--	--	20	10	--	--	--	--	--	--	--
12...	--	--	<10	<10	--	--	--	--	--	--	--
AUG											
23...	<10	<10	30	30	<.2	<50	<1	<10	<1000	30	1.5
23...	<10	<10	20	10	<.2	780	<1	<10	<1000	30	2.1
SEP											
06...	--	--	30	30	--	--	--	--	--	--	--
06...	--	--	20	10	--	--	--	--	--	--	--

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN.

LOCATION.--Lat 36°28'19", long 82°50'50", Hawkins County, Hydrologic Unit 06010104, on right bank 1,500 ft (500 m) upstream from Surgoinsville Creek and county bridge at Surgoinsville, 9.8 mi (15.8 km) upstream from Big Creek, and at mile 118.7 (191.0 km). Records include flow of Surgoinsville Creek.

DRAINAGE AREA.--2,874 mi^2 (7,444 km^2), includes that of Surgoinsville Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. Prior to April 1941 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,088.46 ft (331.763 m) above mean sea level.

REMARKS.--Water-discharge records fair. Flow partly regulated by four reservoirs (see p.390).

AVERAGE DISCHARGE.--37 years, 3,745 ft^3/s (106.1 m^3/s), 17.70 in/yr (450 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,600 ft^3/s (1,690 m^3/s) Feb. 18, 1944, gage height, 17.48 ft (5.328 m); minimum, 470 ft^3/s (13.3 m^3/s), Oct. 21, 1941; minimum daily, 528 ft^3/s (15.0 m^3/s) Oct. 21, 1941. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 59,300 ft^3/s (1,680 m^3/s) Mar. 13, 1963, gage height, 17.13 ft (5.221 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 53,500 ft^3/s (1,520 m^3/s) Apr. 5, gage height, 15.98 ft (4.871 m); minimum, 803 ft^3/s (22.7 m^3/s) July 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2640	6080	6310	9740	4370	4580	3660	3850	3440	5150	1180	2810
2	3420	5480	2110	7490	3950	3550	2740	3280	2680	5320	1920	2790
3	2020	4290	2770	6770	1460	2650	3900	1950	3030	3970	1590	3680
4	2090	3700	2790	7800	2050	2300	15500	2770	3610	1680	2550	3200
5	3540	3560	1460	7220	1720	4620	47100	2590	2620	1660	1850	1440
6	3190	3850	2350	5340	3050	2610	36800	5540	2180	4120	1650	1960
7	3780	1460	3330	4020	4330	2800	13400	4910	4470	4630	1590	4200
8	5680	3170	10100	7340	3930	4020	7960	3190	3100	4370	1100	3390
9	9710	4190	11800	6510	2690	2240	8050	4270	2470	3280	2720	3860
10	16600	3750	9480	8210	2940	1950	6980	5480	1730	3130	2500	3780
11	8940	2700	6100	9480	2220	1880	5700	5960	2280	4020	3800	3020
12	5850	3700	5450	6770	2650	1960	4040	2510	3330	3010	3470	2430
13	4780	3830	9260	6360	2310	5700	5900	1860	2430	4320	2080	2990
14	6100	2390	9210	2830	3860	6570	6220	1220	3240	4730	1550	3370
15	5240	2070	5870	2660	6140	4420	6860	1190	1520	4720	2200	3450
16	4420	3220	5370	4220	6060	3240	3970	1350	3540	4710	3560	4330
17	2720	2920	7550	9710	6970	4320	2880	2680	4020	1810	3910	4510
18	3560	3400	2660	7860	4780	5700	5100	4070	2240	1720	3670	3010
19	7740	2240	2240	7490	2350	6190	4730	4570	1090	3980	2790	3300
20	6950	1460	3150	3700	2630	5320	3170	3440	1570	3070	1780	3550
21	7370	2000	8300	6770	3790	3750	2920	2970	2620	2710	1010	5100
22	5570	3350	7650	4700	3140	6770	4940	2970	3080	2670	948	3890
23	3260	4940	3830	2880	1860	9350	4070	3680	3190	842	1960	4180
24	1210	2920	5590	2070	3260	5790	3190	3920	4240	891	2980	4160
25	2680	1210	2550	3540	5560	4270	2180	1950	4600	2720	2640	2730
26	9580	1080	1870	4910	6010	2430	3310	1050	4020	2570	2250	2940
27	10400	1090	1750	3330	4340	2180	4040	1280	4040	1910	2680	2550
28	8740	1360	1860	4970	4940	1950	2470	2240	5680	2060	1530	3540
29	6860	3900	2590	7710	---	1690	3190	1120	5700	1170	3460	4310
30	5510	8970	6100	2850	---	3240	3280	2240	5590	2390	2430	4240
31	3280	---	6190	2180	---	6830	---	2550	---	2720	3590	---
TOTAL	173430	98280	157640	177430	103360	124870	228250	92650	97350	96053	72938	102710
MEAN	5595	3276	5085	5724	3691	4028	7608	2989	3245	3098	2353	3424
MAX	16600	8970	11800	9740	6970	9350	47100	5960	5700	5320	3910	5100
MIN	1210	1080	1460	2070	1460	1690	2180	1050	1090	842	948	1440

CAL YR 1976 TOTAL 1289878 MEAN 3524 MAX 16600 MIN 769 MEAN‡ 3636 CFSM‡ 1.27 IN.‡ 17.22
WTR YR 1977 TOTAL 1524961 MEAN 4178 MAX 47100 MIN 842 MEAN‡ 4103 CFSM‡ 1.43 IN.‡ 19.38

‡ Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry Lakes.

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1974 to current year.

INSTRUMENTATION.--Temperature recorder since November 1974.

REMARKS.--Missing record Feb. 2-14 (range in temperature 0.0 to 7.0°C). Flow partly regulated by four reservoirs (see p. 390).

COOPERATION.--Samples collected and analyzed by Tennessee Valley Authority. Temperature records also furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.5°C June 30, 1975, June 12, 1976, July 18, 1977; minimum, 0.0°C on several days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.5°C July 18; minimum, 0.0°C several days in January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMPLING DEPTH (FT)	CROSS SECTION LOCATION (% FROM R BANK)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)
OCT											
13...	1250	1.0	50	2700	220	7.9	15.6	10	10	8.5	9
13...	1815	1.0	50	4220	--	--	17.8	--	--	--	--
NOV											
10...	1250	1.0	50	2160	230	7.9	12.2	7	2	10.2	8
DEC											
08...	1220	1.0	50	10200	260	6.4	7.2	12	6	10.7	13
FEB											
14...	1250	1.0	75	3190	270	8.1	5.6	10	3	14.5	9
MAR											
14...	1145	1.0	25	6620	260	7.7	12.2	13	50	8.8	--
14...	1235	1.0	75	6540	260	7.8	12.2	15	24	8.8	--
APR											
12...	1110	1.0	25	2900	250	7.9	15.0	14	7	9.8	--
12...	1145	1.0	75	2920	260	8.1	15.6	10	8	10.1	--
MAY											
11...	1000	1.0	25	2700	220	8.2	13.9	9	5	10.2	5
11...	1045	1.0	75	2310	230	8.1	13.9	10	5	10.6	18
JUN											
14...	1040	1.0	25	1950	220	7.8	17.2	3	2	9.7	--
14...	1050	1.0	75	1890	220	7.7	17.8	6	3	9.0	--
JUL											
12...	1015	1.0	25	2220	200	7.8	21.1	10	3	8.8	--
12...	1125	1.0	75	1840	200	7.7	21.1	11	2	8.5	--
AUG											
23...	1105	1.0	25	1970	380	7.5	26.1	16	2	5.7	13
23...	1115	1.0	75	1910	390	7.4	26.1	17	2	5.5	14
SEP											
06...	1115	1.0	25	2530	370	8.0	25.0	12	1	7.0	--
06...	1125	1.0	75	2470	330	7.8	25.0	10	1	7.3	--

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	BIO-CHEM-ICAL OXYGEN DEMAND 5 DAY (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	TOTAL CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
OCT											
13...	--	--	--	27	6.3	9.9	1.7	93	0	76	20
13...	1.3	--	60	--	--	--	--	--	--	--	--
NOV											
10...	--	--	--	26	8.0	--	1.6	101	0	83	22
DEC											
08...	--	--	--	34	6.8	11	1.3	85	0	70	24
FEB											
14...	2.3	880	10	31	7.3	13	1.6	98	0	80	19
MAR											
14...	2.2	2000	1100	--	--	--	--	98	0	80	--
14...	1.8	>2000	1120	--	--	--	--	100	0	82	--
APR											
12...	<1.0	880	80	--	--	--	--	99	0	81	--
12...	1.0	900	140	--	--	--	--	112	0	92	--
MAY											
11...	<1.0	500	120	28	7.6	6.5	1.6	105	0	86	17
11...	1.0	660	40	27	7.6	7.0	1.6	107	0	88	18
JUN											
14...	1.8	600	<100	--	--	--	--	98	0	80	--
14...	1.4	7600	200	--	--	--	--	98	0	80	--
JUL											
12...	2.1	>1000	>1000	--	--	--	--	76	0	62	--
12...	2.5	3000	<100	--	--	--	--	--	--	67	--
AUG											
23...	1.7	4000	100	36	7.7	26	2.6	95	0	78	28
23...	2.1	--	--	36	7.9	27	2.6	82	0	67	29
SEP											
06...	2.6	4000	<100	--	--	--	--	90	0	74	--
06...	1.5	2400	100	--	--	--	--	88	0	72	--

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT											
13...	12	<.1	5.6	130	.18	934	7	.82	.15	.17	.07
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
10...	9.0	<.1	4.9	140	.19	782	6	.60	.33	.10	.07
DEC											
08...	17	<.1	4.0	160	.22	4880	40	.65	.10	.20	.10
FEB											
14...	18	<.1	3.2	140	.19	1210	2	.64	.11	.17	.06
MAR											
14...	--	--	--	--	--	--	--	.63	.19	.29	.11
14...	--	--	--	--	--	--	--	.68	.16	.24	.10
APR											
12...	--	--	--	--	--	--	--	.82	.14	.20	.09
12...	--	--	--	--	--	--	--	.87	.12	.16	.08
MAY											
11...	8.0	<.1	--	140	.19	1100	6	.71	.05	.14	.04
11...	6.0	.1	--	130	.18	979	5	.69	.05	.13	.04
JUN											
14...	--	--	--	--	--	--	--	.81	.02	.16	.06
14...	--	--	--	--	--	--	--	.62	.03	.20	.04
JUL											
12...	--	--	--	--	--	--	--	.60	.09	.19	.07
12...	--	--	--	--	--	--	--	.57	.09	.17	.07
AUG											
23...	36	.1	--	230	.31	1220	5	.63	.09	.21	.19
23...	40	.1	--	280	.38	1440	6	.64	.09	.21	.18
SEP											
06...	--	--	--	--	--	--	--	.53	.05	.13	.11
06...	--	--	--	--	--	--	--	.64	.21	.15	.12

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT											
13...	.06	--	--	--	--	--	--	--	--	220	<50
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
10...	.06	300	<2	<100	<10	60	<1	<5	40	420	<50
DEC											
08...	.05	--	--	--	--	--	--	--	--	1000	100
FEB											
14...	--	200	<2	<100	<10	80	<1	<5	20	390	<50
MAR											
14...	--	--	--	--	--	--	--	--	--	950	90
14...	--	--	--	--	--	--	--	--	--	1000	70
APR											
12...	--	--	--	--	--	--	--	--	--	240	<50
12...	--	--	--	--	--	--	--	--	--	250	<50
MAY											
11...	--	400	<2	<100	<10	90	<1	<5	60	90	<50
11...	--	400	<2	<100	<10	110	<1	<5	10	190	<50
JUN											
14...	--	--	--	--	--	--	--	--	--	270	<50
14...	--	--	--	--	--	--	--	--	--	280	<50
JUL											
12...	--	--	--	--	--	--	--	--	--	100	<50
12...	--	--	--	--	--	--	--	--	--	330	<50
AUG											
23...	--	<200	<2	<100	<10	130	<1	<5	<10	120	60
23...	--	260	<2	<100	<10	110	<1	<5	<10	120	<50
SEP											
06...	--	--	--	--	--	--	--	--	--	80	80
06...	--	--	--	--	--	--	--	--	--	100	<50

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT											
13...	--	--	40	<10	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
10...	<10	<10	60	<10	<.2	70	<1	<10	<1000	30	2.3
DEC											
08...	--	--	160	30	--	--	--	--	--	--	--
FEB											
14...	11	<10	80	40	<.2	<50	<1	<10	<1000	10	2.2
MAR											
14...	--	--	130	<10	--	--	--	--	--	--	--
14...	--	--	90	50	--	--	--	--	--	--	--
APR											
12...	--	--	60	<10	--	--	--	--	--	--	--
12...	--	--	30	<10	--	--	--	--	--	--	--
MAY											
11...	<10	<10	10	<10	<.2	<50	4	<10	<1000	40	2.4
11...	<10	<10	30	<10	<.2	<50	<1	<10	<1000	10	2.1
JUN											
14...	--	--	20	10	--	--	--	--	--	--	--
14...	--	--	20	10	--	--	--	--	--	--	--
JUL											
12...	--	--	30	<10	--	--	--	--	--	--	--
12...	--	--	20	10	--	--	--	--	--	--	--
AUG											
23...	<10	<10	50	20	<.2	<50	<1	<10	<1000	20	3.1
23...	<10	<10	20	20	<.2	<50	<1	<10	<1000	40	3.2
SEP											
06...	--	--	30	20	--	--	--	--	--	--	--
06...	--	--	30	30	--	--	--	--	--	--	--

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.0	18.0	19.0	15.0	12.0	13.5	8.0	4.5	6.0	3.5	1.0	2.0
2	20.0	18.5	19.0	14.5	11.0	13.0	7.0	5.0	6.0	3.5	0.5	2.0
3	21.0	18.0	19.5	13.5	11.0	12.0	9.0	4.5	6.5	4.5	1.5	3.5
4	22.0	19.0	20.5	14.0	10.5	12.0	9.5	4.5	6.5	4.5	3.5	4.0
5	21.0	19.0	20.0	12.0	9.0	10.5	8.5	5.0	6.0	5.0	4.0	4.5
6	20.5	19.0	19.5	13.0	9.0	10.5	9.0	5.5	6.5	5.5	4.0	4.5
7	20.5	18.5	19.5	12.0	9.0	10.5	9.0	7.0	8.0	5.0	3.0	4.0
8	19.5	18.0	19.0	10.5	7.0	9.0	7.0	5.0	6.0	4.5	2.0	3.5
9	18.0	15.5	17.0	10.5	9.0	10.0	7.0	4.5	5.5	4.0	3.0	3.5
10	16.0	14.5	15.5	13.5	10.0	11.5	6.5	4.0	5.5	4.0	0.5	2.0
11	16.0	13.5	15.0	11.0	9.0	10.5	8.0	5.5	6.5	1.5	0.0	1.0
12	18.0	14.0	16.0	10.5	9.5	10.0	8.0	6.5	8.0	2.0	0.5	1.0
13	18.5	15.0	16.5	11.0	8.5	9.5	8.0	6.0	6.5	3.5	0.5	2.0
14	18.5	16.0	17.0	10.0	7.0	8.5	8.0	5.5	6.5	5.0	2.0	3.5
15	19.0	15.5	17.0	10.5	8.0	9.5	8.0	6.0	7.0	5.5	3.5	4.0
16	18.0	16.5	17.0	13.5	8.5	10.5	8.5	6.0	7.0	6.0	0.0	3.5
17	18.5	15.0	16.5	11.5	9.5	10.5	7.0	5.5	6.5	8.5	0.0	3.0
18	17.0	12.0	15.0	12.0	9.0	10.5	8.5	5.0	6.5	1.0	0.0	0.5
19	16.0	14.0	15.0	12.0	9.0	10.5	9.0	6.0	8.0	1.0	0.0	0.5
20	16.0	14.5	15.5	12.0	9.5	10.5	8.5	6.0	8.0	1.5	0.0	1.0
21	16.0	14.0	15.0	12.0	8.5	10.0	6.0	3.5	4.5	1.5	0.5	1.0
22	16.0	13.5	14.5	9.5	6.5	8.0	5.5	3.5	4.5	3.5	0.0	1.0
23	15.5	13.5	14.5	9.5	7.0	8.5	5.5	3.0	4.5	3.0	0.0	1.5
24	16.0	14.5	15.0	9.5	6.5	8.5	6.0	1.5	4.0	3.0	1.5	2.0
25	18.0	15.5	16.5	10.0	6.5	8.5	4.0	3.0	3.5	4.0	1.5	3.0
26	15.5	11.5	14.0	10.0	7.0	9.0	4.5	2.0	3.5	3.5	1.5	3.0
27	13.0	11.0	11.5	12.0	10.0	11.5	5.0	2.0	4.0	4.5	2.0	3.5
28	13.5	10.5	12.0	13.5	11.0	12.0	6.0	4.0	5.0	4.5	0.5	2.0
29	14.0	11.0	12.0	11.0	5.5	8.5	5.0	3.0	4.0	3.5	0.0	1.0
30	14.0	11.0	13.0	7.0	5.0	6.0	5.5	2.0	4.0	2.0	0.0	0.5
31	13.5	11.0	12.0	---	---	---	5.5	3.0	4.5	2.0	0.0	1.0
MONTH	22.0	10.5	16.0	15.0	5.0	10.0	9.5	1.5	6.0	8.5	0.0	2.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	0.0	1.5	8.5	5.0	6.5	17.0	13.5	15.5	19.0	16.0	18.0
2	---	---	---	10.0	5.0	7.0	18.5	15.5	17.0	18.0	15.5	16.5
3	---	---	---	10.0	6.5	8.5	18.0	16.5	17.0	20.5	17.0	19.0
4	---	---	---	13.0	9.5	10.5	17.0	13.0	15.0	20.0	18.5	19.5
5	---	---	---	11.5	10.0	10.5	13.0	10.5	11.5	22.0	18.5	20.0
6	---	---	---	10.5	9.5	10.0	10.5	9.0	9.5	21.0	15.5	18.5
7	---	---	---	13.5	10.0	11.0	11.5	8.5	9.5	20.0	15.5	17.0
8	---	---	---	13.5	9.0	10.5	13.0	9.5	11.0	20.5	17.0	19.0
9	---	---	---	13.0	8.5	10.5	13.5	9.5	11.0	22.0	14.0	19.0
10	---	---	---	14.5	11.0	13.0	14.5	10.5	13.0	18.0	13.0	15.0
11	---	---	---	16.0	13.5	15.0	16.0	11.5	14.0	17.0	13.0	15.0
12	---	---	---	16.0	15.5	16.0	18.0	14.0	16.0	20.5	13.5	17.0
13	---	---	---	16.0	13.5	15.0	18.5	13.0	15.5	21.5	15.5	19.5
14	---	---	---	15.5	13.0	14.0	18.0	13.5	15.5	22.0	18.5	20.5
15	5.0	3.0	4.0	16.0	13.0	14.5	18.0	13.5	15.0	25.0	20.5	23.0
16	3.5	1.5	3.0	17.0	14.5	15.5	18.5	13.5	16.0	26.0	19.5	18.5
17	4.0	0.5	2.0	16.0	13.5	14.5	20.0	13.5	19.0	24.0	20.5	23.0
18	4.5	1.5	3.5	15.0	12.0	13.5	19.5	14.5	17.0	22.0	16.0	19.0
19	5.5	3.5	4.5	15.0	11.0	12.0	19.0	14.5	16.5	21.5	16.0	19.0
20	5.0	3.0	4.0	14.0	10.5	12.0	20.0	17.0	19.0	20.5	16.5	19.0
21	5.0	1.5	3.5	14.0	12.0	13.5	20.0	18.0	19.0	21.5	19.0	20.0
22	8.0	2.0	4.5	13.5	9.0	10.5	20.5	15.5	18.0	21.5	19.0	20.0
23	8.5	4.5	6.5	11.5	8.5	10.0	19.5	17.0	18.5	20.0	16.5	18.5
24	9.5	8.0	9.0	14.5	9.0	11.5	17.0	15.5	16.5	20.0	15.5	18.0
25	9.0	5.5	7.0	14.5	10.0	12.0	19.5	15.5	18.0	23.5	18.5	21.0
26	9.5	6.0	8.0	16.0	11.0	14.0	17.0	13.0	15.5	24.0	19.5	22.0
27	9.5	7.0	8.0	16.0	14.5	15.5	17.0	12.0	15.0	26.5	23.0	25.0
28	8.0	6.0	6.5	17.0	15.5	16.0	16.0	14.0	15.0	24.5	21.5	23.5
29	---	---	---	18.5	15.5	17.0	18.5	15.5	17.0	26.0	21.0	24.0
30	---	---	---	19.5	18.0	18.5	20.0	16.5	18.5	25.5	21.5	24.5
31	---	---	---	18.5	15.0	16.5	---	---	---	25.5	21.5	23.5
MONTH				19.5	5.0	12.5	20.5	8.5	15.5	26.5	13.0	20.0

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	17.0	20.0	24.5	18.5	21.0	26.5	23.0	24.5	25.0	21.0	23.0
2	23.0	20.5	21.5	24.0	18.5	20.5	29.0	25.0	26.5	25.5	23.0	24.0
3	23.5	20.0	21.5	24.0	18.5	20.5	27.0	24.0	25.5	25.5	20.5	23.0
4	22.0	17.0	20.0	28.0	22.0	25.0	26.5	21.5	23.0	24.5	20.0	23.0
5	23.0	18.0	20.0	28.0	25.5	26.5	28.0	23.0	25.0	26.5	21.5	24.5
6	24.5	20.5	22.0	26.5	19.5	23.0	29.0	23.5	25.5	28.5	24.0	23.5
7	24.0	16.0	18.5	25.0	19.0	21.0	27.0	24.5	26.0	27.0	19.5	21.0
8	20.0	17.0	18.5	25.5	18.5	21.0	27.0	25.5	26.0	23.5	20.0	21.5
9	21.5	17.0	19.5	25.5	19.5	21.5	26.5	23.5	25.0	24.0	19.5	21.5
10	24.0	17.0	20.5	25.0	20.5	23.0	25.5	23.0	24.0	24.0	20.0	21.0
11	23.0	20.0	21.5	25.0	20.0	22.0	25.0	20.0	22.0	23.0	20.0	21.5
12	21.0	18.5	20.0	24.5	20.0	23.0	25.5	20.0	22.0	24.0	20.0	22.0
13	26.5	20.0	22.0	25.5	19.0	21.5	26.5	22.0	24.5	22.0	20.5	21.5
14	24.0	17.0	19.0	25.0	19.0	20.5	25.5	23.0	24.0	23.0	19.5	20.5
15	25.5	19.5	23.0	25.0	18.5	20.5	26.5	23.0	24.5	24.0	20.0	21.5
16	25.0	19.5	24.0	25.0	18.0	20.5	25.0	21.0	23.0	24.0	20.0	21.5
17	20.5	18.0	19.0	29.0	21.5	25.5	24.5	20.5	21.5	23.5	19.5	20.0
18	23.5	20.0	22.0	29.5	24.0	26.0	24.0	20.0	22.0	23.0	20.0	21.0
19	25.5	21.0	23.5	26.5	20.0	23.0	24.0	21.5	23.5	24.5	20.5	21.5
20	27.0	24.5	25.5	25.0	19.5	22.0	26.5	21.5	24.0	24.0	21.0	22.0
21	25.0	21.0	23.0	26.5	22.0	24.0	26.0	21.5	24.0	23.0	19.0	20.5
22	23.5	19.5	20.5	26.0	21.0	23.0	28.0	24.5	26.0	22.0	19.0	20.5
23	22.0	19.0	20.5	26.0	20.5	23.0	28.5	24.5	26.5	23.0	19.0	20.5
24	23.5	19.0	20.0	28.0	25.0	26.5	25.5	21.5	23.5	23.0	19.5	20.5
25	23.5	18.0	19.5	26.5	21.0	24.5	25.5	21.5	24.0	22.0	20.0	21.0
26	21.5	18.5	19.5	25.5	20.5	24.0	27.0	23.5	25.0	23.5	20.0	21.0
27	24.5	21.0	23.5	28.0	23.0	25.0	25.0	23.0	24.0	22.0	20.0	21.0
28	23.5	18.5	20.5	26.5	23.0	24.5	28.0	22.0	25.0	21.5	20.0	21.0
29	23.5	19.0	20.0	24.0	22.0	23.0	27.0	23.5	23.5	21.5	18.0	19.0
30	24.5	18.0	20.5	24.5	23.0	24.0	24.5	21.0	23.5	21.0	18.0	19.5
31	---	---	---	25.0	21.0	23.0	25.5	21.0	---	---	---	---
MONTH	27.0	16.0	21.0	29.5	18.0	23.0	29.0	20.0	24.0	28.5	18.0	21.5
YEAR	29.5	0.0	15.0									

03491000 BIG CREEK NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°25'34", long 82°57'07", Hawkins County, Hydrologic Unit 06010104, on left bank 300 ft (90 m) upstream from county road bridge, 3 mi (5 km) northeast of Rogersville, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--47.3 mi^2 (122.5 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1941 to June 1949; occasional low-flow measurements, water years 1950-55, 1957; annual maximum, water years 1955-57; October 1957 to current year.

REVISED RECORDS.--WSP 1436: 1945.

GAGE.--Water-stage recorder. Datum of gage is 1,128.9 ft (344.09 m) above mean sea level (city of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

REMARKS.--Records good. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--27 years (water years 1942-48, 1958-77), 59.8 ft^3/s (1.694 m^3/s), 17.17 in/yr (436 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,760 ft^3/s (163 m^3/s) Mar. 12, 1963, gage height, 9.40 ft (2.865 m), from rating curve extended above 3,000 ft^3/s (85.0 m^3/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 10.68 ft (3.255 m) Dec. 30, 1969, backwater from log jam; minimum discharge observed, 1.3 ft^3/s (0.037 m^3/s) Sept. 23, 1955; minimum gage height, 1.32 ft (0.402 m) Sept. 19, Oct. 2, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,600 ft^3/s (159 m^3/s) at 0215 hours Apr. 5, gage height, 9.25 ft (2.819 m), no other peak above base of 1,500 ft^3/s (42.5 m^3/s); minimum discharge, 4.1 ft^3/s (0.116 m^3/s) July 21, 22, gage height, 1.41 ft (0.430 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	32	42	107	19	63	199	34	10	16	8.4	5.8
2	12	26	34	72	18	50	135	31	9.3	22	7.5	5.6
3	9.0	22	27	61	19	42	246	62	8.3	17	6.9	5.4
4	7.0	20	23	53	21	54	1540	37	7.5	13	6.7	5.2
5	5.8	18	21	48	33	82	2290	30	7.2	11	6.8	5.1
6	5.4	16	19	45	23	68	451	27	8.8	9.8	6.2	4.9
7	6.7	15	156	44	21	63	268	25	13	9.0	5.8	6.0
8	17	14	145	40	18	54	198	30	9.3	8.4	6.1	9.1
9	262	13	81	39	18	47	154	23	8.3	7.6	6.0	8.5
10	76	12	60	47	19	42	124	20	8.1	7.2	8.2	6.5
11	35	12	52	46	26	38	103	19	7.5	7.3	13	5.5
12	24	17	165	42	31	54	87	17	7.3	7.5	6.7	5.4
13	17	19	158	39	55	701	76	16	7.3	7.1	6.0	5.2
14	14	17	93	42	54	208	68	15	7.3	6.4	6.1	5.1
15	12	16	74	70	72	131	60	15	35	6.2	10	6.3
16	10	16	68	96	57	97	54	14	19	5.6	15	10
17	11	15	56	62	41	76	49	13	13	5.2	38	9.7
18	11	14	48	58	36	67	45	12	11	4.9	53	8.7
19	9.2	13	41	47	33	57	41	12	11	4.6	23	7.3
20	8.9	13	65	44	32	72	38	12	12	4.5	14	6.5
21	9.8	12	127	38	29	71	35	11	13	4.2	11	5.7
22	9.7	12	78	34	26	82	32	11	23	5.0	9.5	5.3
23	8.7	11	64	30	27	99	35	12	47	5.7	8.4	5.0
24	8.8	10	52	31	51	80	46	11	28	5.0	12	4.9
25	135	10	44	30	65	65	35	14	69	22	19	4.9
26	233	10	46	28	49	55	30	13	34	130	12	5.3
27	66	11	43	27	73	48	27	11	61	28	9.0	6.9
28	40	15	42	26	92	45	26	11	30	16	7.8	7.9
29	30	119	50	22	---	43	66	10	22	12	7.3	6.8
30	25	73	45	22	---	178	45	11	18	11	6.6	5.7
31	33	---	130	20	---	412	---	11	---	9.8	6.2	---
TOTAL	1172.0	623	2149	1410	1058	3244	6603	590	565.2	429.0	362.2	190.2
MEAN	37.8	20.8	69.3	45.5	37.8	105	220	19.0	18.8	13.8	11.7	6.34
MAX	262	119	165	107	92	701	2290	62	69	130	53	10
MIN	5.4	10	19	20	18	38	26	10	7.2	4.2	5.8	4.9
CFSM	.80	.44	1.47	.96	.80	2.22	4.65	.40	.40	.29	.25	.13
IN.	.92	.49	1.69	1.11	.83	2.55	5.19	.46	.44	.34	.28	.15

CAL YR 1976 TOTAL 15742.3 MEAN 43.0 MAX 669 MIN 1.7 CFSM .91 IN 12.38
WTR YR 1977 TOTAL 18395.6 MEAN 50.4 MAX 2290 MIN 4.2 CFSM 1.07 IN 14.47

03491000 BIG CREEK NEAR ROGERSVILLE, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-75, November 1976 to September 1977.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1971 to September 1975, November 1976 to September 1977.

INSTRUMENTATION.--Temperature recorder October 1971 to September 1975, November 1976 to September 1977.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 27.0°C July 21, 1977; minimum, 1.0°C Jan. 31 to Feb. 6, 1977.

EXTREMES FOR NOVEMBER 1976 TO SEPTEMBER 1977.--
WATER TEMPERATURES: Maximum recorded, 27.0°C July 21; minimum, 1.0°C Jan. 31 to Feb. 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1				---	---	---	7.0	7.0	7.0	5.0	4.5	4.5
2				11.0	9.0	10.5	7.0	7.0	7.0	4.5	4.0	4.5
3				11.0	10.5	10.5	7.0	6.5	6.5	4.5	4.0	4.5
4				10.5	10.0	10.5	6.5	6.5	6.5	4.5	4.5	4.5
5				10.5	9.5	10.0	6.5	6.0	6.0	4.5	4.5	4.5
6				9.5	9.0	9.5	6.0	6.0	6.0	5.0	4.5	4.5
7				9.5	9.0	9.0	6.5	5.5	6.0	4.5	4.0	4.5
8				9.5	8.5	9.0	7.0	6.5	7.0	4.5	4.5	4.5
9				8.5	8.5	8.5	6.5	6.5	6.5	4.0	3.5	4.0
10				9.5	8.5	9.0	6.5	6.0	6.5	3.5	3.0	3.0
11				9.5	9.0	9.0	7.0	6.0	6.5	3.5	3.0	3.5
12				9.0	9.0	9.0	7.5	6.5	7.0	3.0	3.0	3.0
13				8.5	8.5	8.5	7.5	7.5	7.5	3.0	3.0	3.0
14				8.0	8.0	8.0	7.0	7.0	7.0	3.0	3.0	3.0
15				8.5	8.0	8.0	7.0	6.5	6.5	3.0	2.5	3.0
16				8.5	8.0	8.5	7.5	7.0	7.0	2.5	2.5	2.5
17				8.5	8.0	8.5	7.5	7.0	7.0	2.5	2.0	2.5
18				8.5	8.0	8.5	7.0	6.5	6.5	2.5	2.5	2.5
19				9.0	8.5	8.5	6.5	6.5	6.5	2.5	2.0	2.0
20				9.0	8.5	9.0	6.5	6.5	6.5	2.0	2.0	2.0
21				9.0	8.5	8.5	6.5	6.0	6.5	2.0	2.0	2.0
22				8.5	8.0	8.0	5.5	5.5	5.5	2.0	2.0	2.0
23				8.0	7.5	7.5	5.5	5.5	5.5	2.0	2.0	2.0
24				7.5	7.5	7.5	5.5	5.0	5.0	2.0	2.0	2.0
25				7.5	7.5	7.5	5.0	5.0	5.0	2.0	2.0	2.0
26				7.5	7.5	7.5	5.0	5.0	5.0	2.0	1.5	2.0
27				8.0	7.5	8.0	5.0	5.0	5.0	2.0	1.5	1.5
28				9.0	8.0	8.5	5.0	5.0	5.0	1.5	1.5	1.5
29				9.0	8.0	8.5	5.0	5.0	5.0	1.5	1.5	1.5
30				8.0	7.5	7.5	5.5	3.5	5.0	1.5	1.5	1.5
31				---	---	---	4.5	2.0	3.5	1.5	1.0	1.5
MONTH				11.0	7.5	8.5	7.5	2.0	6.0	5.0	1.0	3.0

03491000 BIG CREEK NEAR ROGERSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.5	1.0	1.0	9.5	9.0	9.0	14.0	14.0	14.0	---	---	---
2	1.0	1.0	1.0	9.0	8.5	9.0	15.0	14.0	14.0	---	---	---
3	1.0	1.0	1.0	9.5	9.0	9.5	15.5	14.5	15.0	---	---	---
4	1.5	1.0	1.0	11.0	9.5	10.0	14.5	13.0	13.5	---	---	---
5	1.5	1.0	1.0	11.0	11.0	11.0	13.5	11.0	12.5	---	---	---
6	1.5	1.0	1.5	11.5	11.5	11.5	12.5	10.5	11.5	20.5	16.5	18.5
7	1.5	1.5	1.5	12.0	11.5	11.5	14.0	10.5	12.5	22.0	14.5	19.5
8	2.0	2.0	2.0	12.0	11.5	12.0	14.5	12.5	13.5	22.5	18.5	20.5
9	2.0	2.0	2.0	12.5	12.0	12.0	14.5	11.5	13.5	20.0	17.0	18.5
10	2.5	2.5	2.5	13.0	12.5	12.5	16.0	12.5	14.5	17.5	14.0	16.0
11	3.0	2.5	2.5	14.0	13.5	13.5	17.5	13.5	16.0	17.5	13.5	15.5
12	3.0	3.0	3.0	14.0	14.0	14.0	18.5	14.5	16.5	18.5	14.0	16.0
13	4.0	3.5	3.5	14.5	13.5	14.0	19.5	15.0	17.5	19.5	15.0	17.0
14	4.0	4.0	4.0	14.0	13.5	13.5	19.0	15.5	17.0	20.0	16.0	18.0
15	4.5	4.0	4.5	14.0	14.0	14.0	19.0	15.5	17.0	21.5	17.0	19.0
16	4.5	4.5	4.5	14.5	14.0	14.5	20.5	15.5	18.0	23.0	18.5	20.5
17	4.5	4.5	4.5	14.5	14.0	14.5	20.0	15.5	18.0	23.0	19.0	21.0
18	5.0	4.5	4.5	14.5	14.0	14.0	20.0	16.5	17.5	22.0	19.5	21.0
19	5.5	5.0	5.0	14.5	14.5	14.5	---	---	---	---	---	---
20	5.5	5.5	5.5	14.0	13.5	14.0	20.0	17.0	19.0	---	---	---
21	6.0	5.5	5.5	14.0	14.0	14.0	20.0	17.0	18.5	---	---	---
22	6.5	6.0	6.0	14.0	13.0	13.0	20.0	17.5	19.0	---	---	---
23	7.0	6.5	6.5	13.0	13.0	13.0	19.5	18.0	18.5	---	---	---
24	8.0	7.5	8.0	13.0	13.0	13.0	18.0	16.0	17.5	---	---	---
25	8.5	8.0	8.5	13.5	13.0	13.0	---	---	---	---	---	---
26	9.5	8.5	9.0	13.5	13.5	13.5	---	---	---	---	---	---
27	9.5	9.5	9.5	14.0	13.5	13.5	---	---	---	---	---	---
28	10.0	9.5	9.5	14.0	14.0	14.0	---	---	---	---	---	---
29	---	---	---	14.5	14.0	14.5	---	---	---	---	---	---
30	---	---	---	16.0	14.5	15.5	---	---	---	---	---	---
31	---	---	---	15.0	14.0	14.5	---	---	---	---	---	---
MONTH	10.0	1.0	4.0	16.0	8.5	13.0						

	JUNE			JULY			AUGUST			SEPTEMBER		
1				---	---	---	25.0	21.5	23.5	25.5	22.0	23.0
2				---	---	---	24.5	21.5	23.5	24.5	21.5	22.5
3				---	---	---	24.5	23.0	23.5	25.5	21.5	23.0
4				---	---	---	25.0	22.0	23.5	23.5	21.5	22.5
5				---	---	---	25.5	22.5	23.5	24.0	21.5	22.5
6				---	---	---	26.5	23.0	24.5	23.0	21.5	22.0
7				---	---	---	26.0	23.5	24.5	23.0	21.5	22.5
8				---	---	---	26.5	23.0	24.5	23.0	21.0	22.0
9				---	---	---	25.5	22.5	24.0	23.0	20.5	21.5
10				---	---	---	25.5	23.0	24.0	22.5	20.5	21.5
11				---	---	---	25.5	23.0	24.0	22.5	18.5	20.5
12				---	---	---	26.0	22.5	24.0	20.5	17.0	19.0
13				---	---	---	25.5	22.5	24.0	21.0	17.5	19.0
14				---	---	---	24.5	22.0	23.5	21.5	19.5	20.0
15				---	---	---	25.0	22.0	23.0	22.5	19.5	20.5
16				---	---	---	25.0	21.5	23.5	21.0	20.0	20.0
17				---	---	---	24.5	22.5	23.5	21.5	20.5	21.0
18				---	---	---	23.0	21.0	22.0	22.5	20.0	21.0
19				---	---	---	22.0	19.5	21.0	22.5	20.0	21.0
20				---	---	---	22.5	19.0	20.5	23.0	20.0	21.0
21				27.0	23.5	25.5	22.0	19.0	20.5	21.5	18.0	19.5
22				25.5	24.0	24.5	22.5	20.5	21.0	21.0	17.0	19.0
23				26.5	22.5	24.0	23.5	20.5	21.5	21.5	17.5	19.0
24				25.0	23.0	24.0	23.0	20.5	21.5	20.5	18.0	19.5
25				24.0	22.5	23.0	23.5	20.5	21.5	21.5	18.5	20.0
26				23.5	21.5	22.5	24.0	20.5	22.0	20.5	19.5	20.0
27				23.0	20.5	21.5	25.0	20.5	22.0	20.0	19.0	19.5
28				23.0	21.0	22.0	25.0	21.0	22.5	20.0	17.0	18.5
29				22.5	21.0	22.0	25.0	21.0	23.0	18.0	15.5	16.5
30				24.0	21.0	22.5	24.5	21.5	22.5	19.0	15.5	17.0
31				25.0	21.0	23.0	25.0	21.5	23.0	---	---	---
MONTH							26.5	19.0	23.0	25.5	15.5	20.5

YEAR

03491300 BEECH CREEK AT KEPLER, TN

LOCATION.--Lat 36°24'06", long 82°53'09", Hawkins County, Hydrologic Unit 06010104, on upstream right wingwall of county road bridge, at Kepler, 5.9 mi (9.5 km) east of intersection of U. S. Highway 11W and Burem Road, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--47.0 mi^2 (121.7 km^2).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-62, 1964-65; October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,107.83 ft (337.667 m) above mean sea level.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--12 years, 51.7 ft^3/s (1.464 m^3/s), 14.94 in/yr (379 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft^3/s (98.6 m^3/s) Mar. 30, 1975, gage height, 13.38 ft (4.078 m), from rating curve extended above 1,300 ft^3/s (36.8 m^3/s); minimum observed, 0.97 ft^3/s (0.027 m^3/s) Sept. 17, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 12, 1963, reached a stage of 14.6 ft (4.45 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Apr. 5	0245	*2860	81.0	a12.43	3.789	Aug. 17	2300	1340	37.9	8.64	2.633
July 11	0345	1860	52.7	10.23	3.118						

a From tape magnet.

Minimum discharge, 2.8 ft^3/s (0.079 m^3/s) Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	17	30	85	14	38	121	26	15	26	5.1	3.5
2	7.8	14	24	83	13	32	87	23	8.9	29	4.7	3.4
3	6.9	14	20	77	12	30	527	21	7.6	16	4.3	3.2
4	6.2	13	18	40	14	33	1630	20	6.7	12	4.1	3.1
5	5.7	12	18	35	22	32	1670	18	6.1	10	3.9	2.9
6	5.7	11	17	34	62	50	324	16	10	9.6	3.7	2.8
7	7.0	12	154	42	72	52	165	16	20	8.6	3.5	3.1
8	11	12	102	39	75	40	107	28	8.6	7.6	3.7	7.0
9	183	11	54	45	76	35	73	16	7.9	7.0	4.9	4.5
10	32	12	39	140	74	31	59	15	7.6	6.7	4.1	3.4
11	18	12	34	107	58	29	48	13	6.7	506	5.9	4.1
12	14	17	143	80	22	105	41	12	7.0	26	4.7	3.9
13	12	17	99	60	29	832	37	12	6.7	15	3.9	3.2
14	11	16	54	64	29	183	34	11	6.4	11	3.9	3.4
15	11	17	52	80	53	119	31	11	10	10	4.9	3.5
16	11	18	58	125	38	89	28	11	10	8.3	6.4	4.1
17	11	16	43	90	31	64	25	10	7.6	7.0	191	22
18	11	16	35	66	27	72	24	9.3	8.3	6.4	290	13
19	11	16	30	50	25	65	22	11	33	6.1	22	7.3
20	12	15	97	44	25	133	20	9.6	42	5.4	11	5.6
21	11	14	100	40	22	79	19	8.6	14	5.1	7.3	4.7
22	11	14	53	34	21	79	18	8.3	22	5.9	6.7	4.3
23	122	14	41	26	23	62	22	8.9	73	6.4	5.4	4.1
24	236	14	34	28	47	52	42	8.9	128	4.9	84	4.1
25	27	14	28	25	44	45	24	8.9	130	9.6	26	4.3
26	18	14	36	22	36	40	20	9.3	70	31	10	5.6
27	17	17	40	19	53	36	18	8.3	86	9.3	6.7	9.0
28	16	23	39	18	51	34	17	7.6	39	6.4	5.4	10
29	14	170	42	17	---	32	79	7.3	25	5.9	4.5	9.0
30	14	46	38	16	---	439	34	6.7	16	6.7	4.1	8.0
31	18	---	179	15	---	292	---	21	---	5.6	3.9	---
TOTAL	899.3	628	1751	1646	1068	3254	5366	412.7	839.1	830.5	749.7	170.1
MEAN	29.0	20.9	56.5	53.1	38.1	105	179	13.3	28.0	26.8	24.2	5.67
MAX	236	170	179	140	76	832	1670	28	130	506	290	22
MIN	5.7	11	17	15	12	29	17	6.7	6.1	4.9	3.5	2.8
CFSM	.62	.45	1.20	1.13	.81	2.23	3.81	.28	.60	.57	.52	.12
IN.	.71	.50	1.39	1.30	.85	2.58	4.25	.33	.66	.66	.59	.13

CAL YR 1976 TOTAL 12771.2 MEAN 34.9 MAX 400 MIN 1.3 CFSM .74 IN 10.11
WTR YR 1977 TOTAL 17614.4 MEAN 48.3 MAX 1670 MIN 2.8 CFSM 1.03 IN 13.94

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN

LOCATION.--Lat 36°09'58", long 83°29'58", Jefferson County, Hydrologic Unit 06010104, on downstream, left bank side of Cherokee Dam, 2.4 mi (3.9 km) north of the city limit of Jefferson City, 4.8 (7.7 km) northwest of Talbott, and at mile 52.3 (84.2 km).

DRAINAGE AREA.--3,428 mi^2 (8,878 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by five reservoirs above site (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
OCT										
18...	0730	10560	270	6.5	19.0	8	2	5.1	9	--
NOV										
11...	1224	7778	--	--	13.5	--	--	--	--	1.6
15...	0725	4200	260	6.0	12.0	10	2	6.7	7	--
DEC										
06...	0715	15980	250	7.9	8.5	5	3	8.2	7	--
JAN										
17...	0720	15830	260	7.7	3.0	8	8	10.1	6	--
FEB										
14...	0715	4445	270	7.5	2.0	16	2	11.7	5	--
MAR										
22...	0645	11000	260	8.4	7.5	5	4	11.7	6	--
APR										
18...	0830	5556	260	7.9	10.0	3	3	8.3	6	--
MAY										
16...	0915	7083	260	7.1	12.0	10	4	5.2	3	--
JUN										
13...	0930	6500	240	7.5	13.5	10	8	1.0	6	--
JUL										
18...	1335	15500	250	7.4	22.0	7	1	.7	6	--
AUG										
15...	1150	15800	250	7.3	25.0	5	5	.9	4	--
SEP										
21...	1215	3333	240	7.5	25.0	5	3	2.1	10	--

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT										
18...	--	26	7.5	12	1.9	98	0	80	28	18
NOV										
11...	<10	--	--	--	--	--	--	--	--	--
15...	--	29	7.3	13	1.6	12	0	10	28	19
DEC										
06...	--	29	6.1	12	1.5	99	0	81	19	16
JAN										
17...	--	34	7.4	9.0	1.5	107	0	88	22	15
FEB										
14...	--	31	7.9	8.0	1.6	104	0	85	--	--
MAR										
22...	--	41	8.5	10	1.5	108	2	92	14	14
APR										
18...	--	--	--	--	--	110	0	90	--	--
MAY										
16...	--	--	--	--	--	107	0	88	--	--
JUN										
13...	--	35	6.4	7.5	1.9	107	0	88	19	9.0
JUL										
18...	--	--	--	--	--	102	--	84	--	--
AUG										
15...	--	--	--	--	--	100	--	82	--	--
SEP										
21...	--	34	8.3	11	1.9	89	--	73	6.0	16

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT										
18...	<.1	3.2	150	.20	4280	7	.59	.03	.17	.03
NOV										
11...	--	--	--	--	--	--	--	--	--	--
15...	<.1	3.3	140	.19	1590	10	.68	.02	.16	.04
DEC										
06...	<.1	3.6	150	.20	6470	3	.88	.10	.07	.03
JAN										
17...	<.1	3.2	140	.19	5980	9	.70	.15	.12	.05
FEB										
14...	<.1	--	--	--	--	2	.77	.16	.08	.03
MAR										
22...	<.1	--	160	.22	4750	6	.59	.17	.11	.03
APR										
18...	--	--	--	--	--	--	.66	.15	.31	.04
MAY										
16...	--	--	--	--	--	--	.73	.16	.14	.03
JUN										
13...	<.1	--	160	.22	2810	5	.92	.04	.10	.02
JUL										
18...	--	--	--	--	--	--	.23	.17	.17	.03
AUG										
15...	--	--	--	--	--	--	.14	.13	.09	.01
SEP										
21...	.1	--	140	.19	1260	11	--	--	--	--

DATE	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT										
18...	--	--	--	--	--	--	--	--	300	--
NOV										
11...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	190	--
DEC										
06...	400	<2	<100	<10	80	2	<5	30	240	<10
JAN										
17...	--	--	--	--	--	--	--	--	140	--
FEB										
14...	--	--	--	--	--	--	--	--	370	--
MAR										
22...	<200	--	<100	<10	--	<1	--	110	150	13
APR										
18...	--	--	--	--	--	--	--	--	<50	--
MAY										
16...	--	--	--	--	--	--	--	--	100	--
JUN										
13...	<200	--	<100	<10	--	<1	--	<10	330	<10
JUL										
18...	--	--	--	--	--	--	--	--	210	--
AUG										
15...	--	--	--	--	--	--	--	--	190	--
SEP										
21...	1000	--	<100	<10	--	<1	--	50	330	<10

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT									
18...	--	90	--	--	--	--	--	--	--
NOV									
11...	--	--	--	--	--	--	--	--	--
15...	--	30	--	--	--	--	--	--	--
DEC									
06...	<10	20	.2	<50	2	<10	<1000	<10	2.8
JAN									
17...	--	20	--	--	--	--	--	--	--
FEB									
14...	--	130	--	--	--	--	--	--	--
MAR									
22...	<10	80	<.2	<50	--	<10	<1000	30	1.6
APR									
18...	--	<10	--	--	--	--	--	--	--
MAY									
16...	--	20	--	--	--	--	--	--	--
JUN									
13...	<10	90	<.2	<50	--	<10	<1000	60	4.3
JUL									
18...	--	190	--	--	--	--	--	--	--
AUG									
15...	--	160	--	--	--	--	--	--	--
SEP									
21...	<10	110	<.2	<50	--	<10	<1000	10	--

03494900 HOLSTON RIVER AT STRAWBERRY PLAINS, TN

LOCATION.--Lat 36°03'30", long 83°42'17", Knox County, Hydrologic Unit 06010104, at McBee Bridge on Mascot Road, 0.8 mi (1.3 km) southwest of Strawberry Plains, 1.7 mi (2.7 km) east of Mascot, and at mile 17 (27 km).

DRAINAGE AREA.--3,626 mi² (9,391 km²).

PERIOD OF RECORD.--October 1976 to September 1977.

REMARKS.--Flow regulated by five upstream reservoirs (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
FEB												
16...	1035	4600	260	9.1	3.0	17	3	15.2	8	2.8	60	10
MAR												
09...	0940	220	260	8.2	10.2	6	1	12.5	6	2.3	240	<10
APR												
13...	0935	4990	270	7.9	14.9	9	19	9.1	--	1.7	640	320
MAY												
10...	1410	4680	270	7.7	14.7	8	3	11.0	18	<1.0	<100	<100
JUN												
08...	0930	6310	250	7.8	13.5	10	7	6.0	--	1.2	1400	<100
JUL												
20...	1300	--	260	7.6	24.0	5	1	5.3	--	1.7	4600	<100
AUG												
03...	1345	--	260	7.7	25.5	8	1	5.8	11	1.3	2200	100
SEP												
13...	0935	--	240	7.2	24.7	10	10	5.2	--	2.1	11200	800

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
FEB												
16...	36	8.6	8.2	1.9	104	30	135	18	11	<.1	2.8	170
MAR												
09...	--	--	--	--	134	0	110	--	--	--	--	--
APR												
13...	--	--	--	--	134	0	110	--	--	--	--	--
MAY												
10...	35	8.0	9.5	1.7	120	0	98	26	13	<.1	--	150
JUN												
08...	--	--	--	--	122	0	100	--	--	--	--	--
JUL												
20...	--	--	--	--	112	0	92	--	--	--	--	--
AUG												
03...	35	7.4	10	1.8	111	0	91	21	14	<.1	--	160
SEP												
13...	--	--	--	--	90	0	74	--	--	--	--	--

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)
FEB												
16...	.23	2110	6	.82	.04	.24	.04	200	<100	<10	80	<1
MAR												
09...	--	--	--	.27	.06	.13	.02	--	--	--	--	--
APR												
13...	--	--	--	.80	.06	.16	.03	--	--	--	--	--
MAY												
10...	.20	1900	3	.71	.06	.14	.01	<200	<100	<10	--	1
JUN												
08...	--	--	--	.88	.02	.13	.02	--	--	--	--	--
JUL												
20...	--	--	--	.30	.10	.10	.01	--	--	--	--	--
AUG												
03...	.22	--	3	.36	.06	.12	.02	<200	<100	<10	--	1
SEP												
13...	--	--	--	1.6	.07	.12	.04	--	--	--	--	--

03494900 HOLSTON RIVER AT STRAWBERRY PLAINS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB												
16...	30	610	--	<10	<10	90	--	<.2	<50	<10	40	2.4
MAR												
09...	--	220	60	--	--	20	<10	--	--	--	--	--
APR												
13...	--	640	100	--	--	80	<10	--	--	--	--	--
MAY												
10...	10	100	<50	<10	<10	30	--	<.2	<50	<10	60	2.5
JUN												
08...	--	210	200	--	--	40	20	--	--	--	--	--
JUL												
20...	--	280	<50	--	--	50	<10	--	--	--	--	--
AUG												
03...	30	<50	<50	<10	<10	40	10	<.2	<50	<10	160	1.3
SEP												
13...	--	150	<50	--	--	110	<10	--	--	--	--	--

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN

LOCATION.--Lat 36°00'56", long 83°49'54", Knox County, Hydrologic Unit 06010104, on right bank at bridge on U.S. Highway 70, at Knoxville city limits, and 5.5 mi (8.8 km) upstream from confluence with French Broad River.

DRAINAGE AREA.--3,747 mi^2 (9,705 km^2).

PERIOD OF RECORD.--Water years 1965, October 1976 to September 1977.

REMARKS.--Flow regulated by five reservoirs (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
FEB												
16...	1255	14600	260	8.6	3.0	17	5	15.3	4	1.7	100	10
MAR												
09...	1140	310	280	8.1	10.9	8	3	11.9	8	2.2	120	<10
APR												
13...	1040	4850	290	8.1	19.0	9	22	8.6	--	<1.0	660	240
MAY												
10...	1120	3270	280	7.1	16.0	8	4	8.9	8	<1.0	3000	200
JUN												
08...	1050	6960	250	7.8	15.0	13	8	6.1	--	1.0	1200	<100
JUL												
20...	1145	--	260	7.7	23.5	7	1	4.1	--	1.9	600	100
AUG												
03...	1435	--	260	7.6	25.5	5	1	4.8	9	1.4	3600	200
SEP												
13...	1025	--	250	8.9	24.5	10	15	5.5	--	3.5	16000	1000

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
FEB												
16...	36	8.4	7.8	1.8	110	12	110	.1	8.0	<.1	2.8	220
MAR												
09...	--	--	--	--	159	0	130	--	--	--	--	--
APR												
13...	--	--	--	--	171	0	140	--	--	--	--	--
MAY												
10...	40	9.6	8.5	1.7	122	0	100	21	12	<.1	--	170
JUN												
08...	--	--	--	--	115	0	94	--	--	--	--	--
JUL												
20...	--	--	--	--	113	0	93	--	--	--	--	--
AUG												
03...	34	7.8	10	1.8	112	0	92	20	15	<.1	--	190
SEP												
13...	--	--	--	--	91	5	83	--	--	--	--	--

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)
FEB												
16...	.30	8670	6	.81	.02	.15	.03	300	<100	<10	80	<1
MAR												
09...	--	--	--	.32	.05	.17	.03	--	--	--	--	--
APR												
13...	--	--	--	1.0	.02	.10	.03	--	--	--	--	--
MAY												
10...	.23	1500	4	.69	.02	.30	.05	400	<100	<10	--	1
JUN												
08...	--	--	--	.91	.02	.14	.02	--	--	--	--	--
JUL												
20...	--	--	--	.30	.12	.13	.01	--	--	--	--	--
AUG												
03...	.26	--	1	.38	.09	.11	.03	<200	<100	<10	--	<1
SEP												
13...	--	--	--	.30	.05	.11	.06	--	--	--	--	--

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB												
16...	<10	110	<50	<10	<10	80	<10	<.2	<50	<10	<10	2.4
MAR												
09...	--	390	70	--	--	50	<10	--	--	--	--	--
APR												
13...	--	680	80	--	--	70	<10	--	--	--	--	--
MAY												
10...	60	170	<50	11	<10	40	<10	<.2	<50	<10	330	--
JUN												
08...	--	380	190	--	--	40	10	--	--	--	--	--
JUL												
20...	--	280	<50	--	--	70	10	--	--	--	--	--
AUG												
03...	50	110	70	<10	<10	30	20	<.2	<50	<10	30	1.3
SEP												
13...	--	530	<50	--	--	210	<10	--	--	--	--	--

03497000 TENNESSEE RIVER AT KNOXVILLE, TN

LOCATION.--Lat 35°57'17", long 83°51'42", Knox County, Hydrologic Unit 06010201, on left bank 0.7 mi (1.1 km) downstream from confluence of French Broad and Holston Rivers, 3.5 mi (5.6 km) upstream from First Creek, 3.6 mi (5.8 km) upstream from Gay Street Bridge at Knoxville, and at mile 651.4 (1,048.1 km). Records include flow of First Creek.

DRAINAGE AREA.--8,934 mi^2 (23,139 km^2), includes that of First Creek.

PERIOD OF RECORD.--October 1899 to current year. Prior to October 1918 monthly discharge only, published in WSP 1306 (daily discharges contained in Tennessee Division of Geology, Bulletin 34). Gage-height records collected in this vicinity since 1883 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 583: 1902(M), 1904(m). WSP 853: Drainage area. WSP 1306: 1899-1918. WSP 1706: Maximum stage and discharge since at least 1791.

GAGE.--Water-stage recorder. Datum of gage is 797.38 ft (243.041 m) above mean sea level. Prior to Sept. 1, 1943, nonrecording gages or water-stage recorders at several sites within 4 mi (6 km) of present site at various datums. Since Sept. 1, 1943, auxiliary water-stage recorder 6.3 mi (10.1 km) downstream from base gage at same datum.

REMARKS.--Records good except those below 5,000 ft^3/s (141.6 m^3/s), which are fair. Flow regulated by six reservoirs (see p. 390).

AVERAGE DISCHARGE.--78 years, 13,070 ft^3/s (370.1 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 195,000 ft^3/s (5,520 m^3/s) Mar. 1, 1902, gage height, 36.4 ft (11.09 m) site and datum then in use, from rating curve extended above 130,000 ft^3/s (3,680 m^3/s); minimum daily, 1,010 ft^3/s (28.6 m^3/s) Mar. 28, 1954; minimum gage height, -1.7 ft (-0.52 m) Sept. 11, 1925, site and datum then in use. Maximum discharge since completion of several upstream dams in Dec. 1941, 89,200 ft^3/s (2,530 m^3/s) Mar. 12, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 45.0 ft (13.72 m) Mar. 8, 1867, site and datum of gage at old city pumping plant, 3.2 mi (5.1 km) downstream from base gage, discharge, 290,000 ft^3/s (8,210 m^3/s), from rating curve extended above 130,000 ft^3/s (3,680 m^3/s), from high-water profile by Corps of Engineers and Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,900 ft^3/s (1,360 m^3/s) Apr. 5, gage height, 18.87 ft (5.752 m); minimum daily discharge, 2,150 ft^3/s (60.9 m^3/s) Sept. 18; minimum gage height, 9.82 ft (2.993 m) Feb. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5590	12900	16200	25400	24900	3320	9470	9810	18800	14700	8200	17600
2	4770	17600	11600	17400	18300	2600	12400	13300	16000	13200	14300	16200
3	3370	14800	17700	17900	5160	2180	14500	11500	17200	7410	11500	12000
4	4670	16500	15200	18400	5220	2430	17200	5430	16300	4200	12400	4500
5	8770	18800	15800	13900	8090	3090	37200	8310	10300	8420	12300	5100
6	6360	15200	15000	20800	9050	3400	13800	8990	15400	16000	12200	9600
7	10100	5260	17800	14600	9400	3640	20500	7230	15900	20300	9710	16400
8	11200	9300	27800	18200	14900	4080	23000	6230	15700	19400	7500	9000
9	13000	16000	27300	20300	10500	3280	21800	8000	14600	16200	13100	6100
10	9860	10400	19600	22000	11700	7100	21300	12800	15600	10100	13600	7500
11	7140	16100	12000	26600	12000	6090	20500	14900	15900	8960	13800	4400
12	9400	17900	12400	26300	7540	4300	16900	13000	10300	17300	13200	2650
13	11800	15600	21000	23200	10800	11600	18800	13200	13500	19900	14200	13400
14	11700	11300	19000	9780	7760	8970	21500	11000	14400	18300	12000	13800
15	12800	12700	20500	4620	7470	8280	22200	10600	14900	17400	11800	14200
16	11600	17600	22800	7040	11400	10000	20300	16500	17200	16300	20000	12200
17	7060	17700	21300	24600	10500	9180	16300	17700	18800	10100	17400	5100
18	12300	20100	18500	24300	9220	10000	16700	18300	15500	8110	19800	2150
19	17800	12900	20100	22500	7250	10200	18500	18100	9160	18200	12000	2750
20	16600	9800	20300	18500	4710	12900	16500	17600	9670	18400	2650	3900
21	18500	11000	28700	15500	4560	11100	17600	12500	19100	18700	2750	11100
22	16800	14500	28000	12700	7660	13800	20500	5430	19200	16500	8000	13600
23	15100	19000	18000	8770	3040	18000	13400	8710	17700	13300	13200	15000
24	9020	17400	17500	8940	5090	17300	5560	14100	16600	8400	15600	14000
25	11000	12900	15700	17300	3380	15900	5860	16600	15100	8220	17400	5600
26	11300	5100	16900	18000	3840	16200	10300	15300	14700	17600	17800	11800
27	7590	4780	14900	10800	2980	11200	17000	15900	8580	17200	17200	16200
28	10500	3290	15000	9770	4780	10400	19100	14600	16400	13100	13200	10200
29	13500	16900	16500	15000	---	10900	21200	7160	15700	13800	10000	6400
30	9030	19600	17000	13000	---	10700	14000	8190	15800	14900	16000	6000
31	9540	---	14500	8000	---	12700	---	17200	---	11800	17400	---
TOTAL	327770	412930	574600	514120	241200	274840	523890	378190	454010	436420	400210	288450
MEAN	10570	13760	18540	16580	8614	8866	17460	12200	15130	14080	12910	9615
MAX	18500	20100	28700	26600	24900	18000	37200	18300	19200	20300	20000	17600
MIN	3370	3290	11600	4620	2980	2180	5560	5430	8580	4200	2650	2150

CAL YR 1976 TOTAL 4222410 MEAN 11540 MAX 31600 MIN 1880
WTR YR 1977 TOTAL 4826630 MEAN 13220 MAX 37200 MIN 2150

03497100 TENNESSEE RIVER BELOW KNOXVILLE, TN

LOCATION.--Lat 35°56'46", long 83°56'48", Knox County, Hydrologic Unit 06010201, on left bank under bridge on State Highway 73, 7.0 mi (11.3 km) downstream from confluence of French Broad and Holston Rivers, near auxiliary gage for station 03497000, and at mile 645.1 (1,038.0 km).

DRAINAGE AREA.--8,963 mi^2 (23,214 km^2).

PERIOD OF RECORD.--Water years 1967, 1968, 1970 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1969 to current year.

INSTRUMENTATION.--Temperature recorder since December 1969.

REMARKS.--Prior to 1970 water year, data published as Tennessee River at Knoxville, Tn, station 03497000. Flow regulated by six reservoirs (see p. 390). Missing record Oct. 1-8 (range in temperature 20.5 to 25.5°C).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.5°C Aug. 29, 1977; minimum, 1.0°C Jan. 21, 1970, Jan. 29, 30, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 29.5°C Aug. 29; minimum, 1.0°C Jan. 29, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	14.5	14.0	14.5	8.0	6.5	7.0	5.0	4.0	4.5
2	---	---	---	15.0	14.0	14.5	8.5	8.0	8.5	4.5	4.0	4.5
3	---	---	---	15.0	14.5	14.5	8.5	8.0	8.5	5.0	4.0	4.5
4	---	---	---	14.5	13.5	14.0	9.0	8.0	8.5	5.0	5.0	5.0
5	---	---	---	14.0	13.5	14.0	9.0	8.0	8.5	5.5	5.0	5.0
6	---	---	---	13.5	12.0	13.0	9.0	8.5	8.5	5.0	4.5	5.0
7	---	---	---	13.5	13.0	13.0	9.0	8.0	8.5	5.0	4.5	5.0
8	---	---	---	13.0	11.0	12.0	8.5	8.0	8.0	4.5	4.0	4.0
9	21.0	19.5	20.0	12.0	10.5	11.5	8.0	6.5	7.0	4.5	4.5	4.5
10	19.5	17.0	18.5	13.0	12.0	12.0	8.0	7.0	7.0	4.5	3.0	4.0
11	19.5	18.5	19.0	13.0	12.0	12.0	8.5	7.0	8.0	3.0	2.0	3.0
12	19.5	18.0	19.0	12.0	11.5	12.0	8.5	8.0	8.5	3.5	2.0	3.0
13	20.5	19.0	20.0	11.5	11.0	11.0	8.5	7.0	8.0	3.0	2.0	3.0
14	20.5	20.0	20.5	11.0	11.0	11.0	8.0	6.5	7.0	3.5	3.0	3.5
15	20.5	19.5	20.0	11.0	10.5	11.0	8.0	6.5	7.0	4.5	3.5	4.0
16	20.0	19.5	20.0	12.0	11.0	11.5	8.0	7.0	8.0	4.0	3.0	3.5
17	19.5	19.0	19.5	11.5	11.5	11.5	8.0	6.5	7.0	3.0	1.5	2.0
18	19.0	18.0	18.5	11.5	11.0	11.5	7.0	6.0	6.5	2.0	2.0	2.0
19	19.0	16.5	18.0	11.5	11.0	11.5	6.5	6.0	6.5	2.0	1.5	2.0
20	18.5	18.0	18.5	11.5	11.0	11.5	7.0	6.0	6.5	3.0	2.0	2.0
21	18.0	17.0	18.0	11.0	10.0	10.5	6.0	5.5	5.5	3.0	2.0	3.0
22	18.0	16.5	17.0	10.5	9.0	9.5	5.5	5.0	5.5	2.0	2.0	2.0
23	18.0	16.5	17.0	10.0	9.0	9.5	6.0	5.0	5.5	3.5	2.0	3.0
24	18.0	17.0	17.0	10.5	9.5	10.0	5.5	4.5	5.0	3.5	3.0	3.0
25	18.0	17.0	18.0	10.0	9.5	10.0	5.5	5.0	5.5	3.5	3.0	3.5
26	17.0	16.5	17.0	10.5	10.0	10.5	6.0	5.5	5.5	3.5	3.5	3.5
27	16.5	14.5	16.0	11.5	10.5	11.0	6.0	5.5	5.5	4.0	3.5	4.0
28	14.5	14.0	14.5	11.0	10.5	11.0	6.0	5.5	6.0	4.0	3.0	4.0
29	15.0	14.0	14.5	10.5	9.0	10.0	6.0	5.5	5.5	3.0	1.0	2.0
30	15.5	14.5	15.0	9.0	8.0	8.5	5.5	4.5	5.5	2.0	1.0	1.5
31	15.0	14.5	15.0	---	---	---	5.5	5.0	5.0	3.0	1.5	2.0
MONTH				15.0	8.0	11.5	9.0	4.5	7.0	5.5	1.0	3.5

03497100 TENNESSEE RIVER BELOW KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	1.5	2.0	9.5	8.0	9.0	15.5	15.0	15.5	16.0	15.0	15.5
2	3.0	1.5	2.0	10.0	7.0	8.0	15.5	14.0	14.5	16.0	15.5	16.0
3	3.5	3.0	3.0	7.0	7.0	7.0	14.5	14.0	14.5	15.5	15.0	15.0
4	4.0	3.0	3.5	8.5	7.0	8.0	15.0	14.0	14.5	15.5	14.5	15.0
5	5.0	4.0	4.5	8.5	7.0	8.0	14.5	13.0	14.0	18.0	15.5	16.5
6	4.5	3.5	4.0	9.0	8.5	9.0	13.0	12.0	12.0	17.0	16.5	16.5
7	3.5	2.0	3.0	11.0	9.0	9.5	13.5	10.5	11.5	16.5	16.0	16.0
8	3.0	1.5	2.0	9.5	8.0	8.5	13.5	13.0	13.5	18.5	17.0	18.0
9	4.0	2.0	3.0	9.5	8.5	9.0	14.0	13.0	13.5	19.0	17.0	18.0
10	4.0	3.0	3.5	10.5	9.0	9.5	14.5	13.5	14.0	18.0	15.0	16.0
11	4.5	3.5	4.0	10.5	9.5	10.0	14.5	14.0	14.5	17.0	15.0	16.0
12	4.5	4.0	4.5	11.5	10.0	11.0	15.0	14.5	14.5	16.0	14.5	15.0
13	5.0	4.5	4.5	11.5	10.5	11.0	16.0	14.5	15.5	16.5	15.0	15.5
14	5.0	4.5	4.5	12.0	11.0	11.5	16.0	14.0	15.0	16.5	15.5	16.0
15	6.0	4.5	5.0	12.0	11.5	11.5	14.5	14.0	14.5	16.5	15.5	16.0
16	5.5	4.5	5.0	12.0	11.0	11.5	15.0	14.0	14.5	18.0	15.5	17.0
17	4.5	3.5	4.0	11.5	10.5	11.0	15.0	14.5	14.5	16.0	15.5	15.5
18	5.0	4.0	4.0	13.0	10.0	11.5	15.0	14.5	15.0	16.5	15.0	15.5
19	6.0	4.5	5.0	13.0	10.0	11.5	16.5	14.0	15.5	16.0	15.5	15.5
20	6.0	5.0	5.5	12.0	10.0	11.5	15.0	14.5	14.5	16.5	15.5	16.0
21	6.0	5.0	5.5	11.5	10.5	11.0	15.5	14.5	15.0	17.0	16.0	16.5
22	5.5	4.5	5.0	10.5	10.5	10.5	15.0	14.0	14.5	17.0	16.5	16.0
23	6.5	5.0	5.5	10.5	9.5	10.0	15.0	14.0	14.5	18.5	16.5	17.0
24	8.0	6.0	6.5	11.0	10.0	10.5	16.0	14.0	15.0	18.5	16.5	17.0
25	9.0	7.0	8.0	12.0	11.0	11.5	16.0	15.5	15.5	17.0	16.0	16.5
26	9.0	8.5	8.5	13.0	11.5	12.0	16.5	14.5	15.5	18.0	16.0	17.0
27	9.5	8.5	9.0	13.5	13.0	13.0	15.5	14.0	15.0	17.0	16.0	16.5
28	10.0	9.0	9.5	13.5	13.0	13.5	14.5	14.0	14.0	18.0	16.5	17.0
29	---	---	---	14.0	13.0	13.5	14.5	14.0	14.0	18.5	16.5	17.0
30	---	---	---	14.5	13.5	14.0	15.0	14.0	14.5	20.0	18.0	18.5
31	---	---	---	15.5	14.5	15.0	---	---	---	20.0	17.0	19.0
MONTH	10.0	1.5	5.0	15.5	7.0	10.5	16.5	10.5	14.5	20.0	14.5	16.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.5	19.0	19.5	24.0	21.0	22.0	26.5	26.0	26.5	28.5	28.0	28.5
2	19.5	16.5	18.5	23.0	21.5	22.0	27.0	25.5	26.5	28.0	27.0	28.0
3	18.0	16.5	17.0	24.0	21.5	23.0	26.5	25.5	26.0	28.0	27.0	28.0
4	18.5	16.5	18.0	24.0	23.0	23.0	26.0	25.5	25.5	28.0	27.0	28.0
5	19.0	18.0	18.0	25.5	24.0	24.5	26.5	25.5	26.0	28.5	28.0	28.0
6	20.5	18.5	19.0	25.5	22.0	24.0	27.0	26.0	26.5	29.0	28.0	28.5
7	19.5	16.5	18.0	24.0	22.0	23.0	27.0	26.0	26.5	28.5	26.5	28.0
8	18.5	16.0	17.0	24.0	23.0	23.5	27.0	26.5	27.0	26.5	26.0	26.0
9	18.5	16.5	18.0	24.5	23.0	24.0	27.0	25.5	26.0	26.0	24.5	25.5
10	19.0	16.5	18.0	25.0	23.0	24.0	26.0	25.5	25.5	25.0	23.0	24.5
11	19.0	17.0	18.0	25.0	23.5	24.0	27.0	26.0	26.5	26.5	25.0	26.0
12	19.5	17.0	18.5	26.0	23.0	24.5	28.0	26.5	27.0	26.0	25.5	26.0
13	21.0	19.0	20.0	25.0	23.5	24.0	28.0	26.5	27.0	26.0	25.0	25.5
14	20.5	18.0	19.5	25.0	24.0	24.5	27.0	26.5	26.5	26.0	25.5	26.0
15	20.0	18.0	19.0	25.5	24.0	25.0	28.0	26.0	26.5	26.5	25.5	26.0
16	21.0	18.5	19.5	26.0	24.0	25.0	28.0	26.5	27.0	26.5	25.5	26.0
17	21.0	18.0	19.5	26.0	24.0	25.0	28.0	26.5	27.0	26.5	26.0	26.5
18	20.0	18.5	19.0	26.0	25.5	25.5	26.5	26.0	26.5	26.5	26.0	26.0
19	21.5	18.5	20.5	27.0	24.5	25.5	26.5	24.0	25.5	26.0	25.5	26.0
20	23.5	21.0	21.5	26.0	25.0	25.5	27.0	26.0	26.5	26.5	25.5	26.0
21	21.5	19.0	20.0	26.5	25.0	25.5	28.0	26.5	26.5	25.5	24.5	25.0
22	21.5	19.5	20.5	26.5	25.0	25.5	27.0	26.5	26.5	26.0	24.5	25.0
23	22.0	20.0	20.5	26.0	25.0	25.0	28.5	26.5	28.0	26.0	24.5	25.5
24	22.0	20.0	20.5	27.0	25.0	26.0	28.5	26.0	27.0	26.0	25.0	25.5
25	23.0	21.0	21.5	26.5	25.5	26.0	28.0	26.5	27.0	26.0	25.0	25.0
26	21.5	20.5	21.0	25.5	25.0	25.5	28.5	27.0	28.0	25.0	24.5	24.5
27	23.5	21.0	21.5	26.0	25.5	25.5	28.5	28.0	28.5	24.5	24.0	24.5
28	23.5	21.0	22.0	26.0	25.5	26.0	28.5	27.0	28.0	24.5	24.0	24.0
29	23.0	21.5	22.0	26.0	25.5	25.5	29.5	28.0	28.5	24.0	23.0	24.0
30	24.0	21.5	22.0	25.0	25.0	25.0	29.0	28.0	28.5	23.5	23.5	23.5
31	---	---	---	26.5	25.0	26.0	29.0	28.0	28.5	---	---	---
MONTH	24.0	16.0	19.5	27.0	21.0	24.5	29.5	24.0	27.0	29.0	23.0	26.0
YEAR	29.5	1.0	15.5									

03497300 LITTLE RIVER ABOVE TOWNSEND, TN
(Hydrologic bench-mark station)

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along State Highway 73, 0.3 mi (0.5 km) upstream from Rush Branch, 0.4 mi (0.6 km) southeast of Park entrance, 2.2 mi (3.5 km) southeast of Townsend, and at mile 35.3 (56.8 km).

DRAINAGE AREA.--106 mi^2 (275 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,106.92 ft (337.389 m) above mean sea level.

REMARKS.--Water-discharge records good. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--14 years, 297 ft^3/s (8.411 m^3/s), 38.05 in/yr (966 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s (453 m^3/s) Mar. 16, 1973, gage height, 12.30 ft (3.749 m); minimum, 32 ft^3/s (0.91 m^3/s) Oct. 30, 31, 1963, Oct. 7-10, 1970; minimum gage height, 1.26 ft (0.384 m) Sept. 17, 18, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft^3/s (87.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 12	2330	4160	118	6.47	1.972	Aug. 17	1545	7390	209	8.44	2.573
Apr. 5	0045	*10400	295	9.96	3.036						

Minimum discharge, 68 ft^3/s (1.93 m^3/s) June 12, gage height, 1.51 ft (0.460 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	300	296	374	145	534	582	281	119	352	111	179
2	171	270	260	330	149	412	463	252	106	337	97	163
3	122	244	228	308	166	351	1100	263	97	267	86	138
4	98	221	208	287	162	516	2690	280	90	238	87	135
5	83	200	192	276	148	489	5070	204	82	215	83	125
6	73	182	192	259	120	736	1450	187	95	200	83	200
7	218	172	511	290	114	694	863	211	141	185	75	523
8	341	159	499	262	121	548	628	191	86	171	88	1240
9	789	146	395	468	127	452	490	171	80	159	360	552
10	364	142	345	706	126	391	408	158	76	157	281	394
11	250	134	324	454	116	364	359	149	69	163	212	324
12	197	154	392	368	142	975	317	140	73	144	144	268
13	166	128	571	325	218	2000	293	132	86	146	122	245
14	142	121	464	339	178	910	272	124	237	126	156	267
15	123	131	597	348	182	642	253	120	135	116	203	309
16	112	125	594	307	169	525	234	112	132	107	195	337
17	107	118	480	253	151	427	219	106	193	110	2020	435
18	99	114	396	266	163	383	207	99	150	104	1460	367
19	92	110	343	249	160	341	196	100	404	105	610	369
20	107	107	429	253	159	346	249	92	485	107	404	370
21	128	104	446	247	150	295	237	86	777	99	315	318
22	99	100	374	224	147	352	226	86	485	162	265	277
23	93	94	340	257	157	309	354	101	764	172	231	245
24	99	90	302	210	537	292	412	116	616	111	356	220
25	396	90	288	196	438	276	317	144	1450	138	288	200
26	801	91	326	184	419	258	285	184	1910	188	236	293
27	445	142	281	204	1170	245	268	141	1040	127	213	295
28	324	270	272	186	775	232	255	156	633	108	196	304
29	266	635	258	145	---	260	273	156	471	99	177	256
30	253	380	236	169	---	1280	258	173	369	117	169	231
31	372	---	470	166	---	869	---	138	---	98	160	---
TOTAL	7225	5274	11309	8910	6809	16704	19228	4853	11451	4928	9483	9579
MEAN	233	176	365	287	243	539	641	157	382	159	306	319
MAX	801	635	597	706	1170	2000	5070	281	1910	352	2020	1240
MIN	73	90	192	145	114	232	196	86	69	98	75	125
CFSM	2.20	1.66	3.44	2.71	2.29	5.09	6.05	1.48	3.60	1.50	2.89	3.01
IN.	2.54	1.85	3.97	3.13	2.39	5.86	6.75	1.70	4.02	1.73	3.33	3.36

CAL YR 1976 TOTAL 100637 MEAN 275 MAX 1930 MIN 39 CFSM 2.59 IN 35.32
WTR YR 1977 TOTAL 115753 MEAN 317 MAX 5070 MIN 69 CFSM 2.99 IN 40.62

03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

REMARKS.--No record Jan. 21 to Feb. 7.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.0°C June 23, 1964, July 3, 1970; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 25.5°C July 21, Aug. 7; minimum, 0.0°C Feb. 17, but probably occurred also during period of missing record Jan. 21 to Feb. 7.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	14.5	15.0	9.5	9.0	9.5	4.5	3.0	3.5	4.0	3.0	3.5
2	14.5	14.5	14.5	9.5	8.0	8.5	4.0	3.5	3.5	3.0	3.0	3.0
3	15.0	14.5	14.5	8.5	8.5	8.5	4.0	4.0	4.0	3.0	3.0	3.0
4	15.0	15.0	15.0	8.5	8.5	8.5	4.0	4.0	4.0	4.0	3.0	3.5
5	15.0	15.0	15.0	8.5	7.0	8.0	4.0	4.0	4.0	4.5	4.0	4.0
6	15.5	15.0	15.0	7.0	5.5	6.0	4.5	4.0	4.0	4.5	4.5	4.5
7	15.5	15.0	15.5	6.5	5.5	6.0	6.5	4.5	5.5	4.5	4.5	4.5
8	15.5	15.0	15.5	6.5	6.0	6.5	6.5	5.0	6.0	4.5	3.5	4.0
9	15.0	13.5	14.5	6.0	5.0	5.5	5.0	4.0	4.5	4.5	3.5	4.0
10	13.5	11.5	12.0	8.0	5.5	6.5	5.0	4.0	4.0	5.0	4.0	4.5
11	11.5	11.0	11.5	8.0	8.0	8.0	6.5	5.0	5.5	4.0	3.0	3.5
12	11.0	11.0	11.0	8.0	7.0	7.0	8.0	6.5	7.0	3.0	3.0	3.0
13	11.0	11.0	11.0	7.0	6.0	6.0	8.0	7.0	8.0	3.0	3.0	3.0
14	11.5	11.0	11.0	5.5	5.5	5.5	7.0	5.5	6.0	4.0	3.0	3.5
15	11.5	11.0	11.5	5.5	5.5	5.5	6.5	5.5	6.0	4.5	4.5	4.5
16	11.5	11.0	11.0	6.5	5.5	6.0	7.0	7.0	7.0	4.5	3.0	3.5
17	11.5	11.5	11.5	6.5	6.5	6.5	7.0	6.0	6.5	3.0	3.0	3.0
18	10.5	10.5	10.5	6.5	6.5	6.5	6.0	6.0	6.0	3.0	3.0	3.0
19	10.5	10.0	10.0	6.5	6.5	6.5	6.5	6.0	6.0	3.0	3.0	3.0
20	10.5	10.0	10.0	7.0	6.5	6.5	7.0	6.5	7.0	3.0	2.0	2.0
21	10.5	10.5	10.5	7.0	6.5	7.0	7.0	4.0	5.5	---	---	---
22	10.5	9.5	10.0	6.5	5.5	6.0	4.0	3.0	3.5	---	---	---
23	9.5	9.5	9.5	5.5	4.5	5.0	3.5	3.0	3.5	---	---	---
24	10.5	9.5	10.0	4.5	4.5	4.5	3.5	3.5	3.5	---	---	---
25	11.0	10.5	10.5	4.5	4.5	4.5	3.5	3.5	3.5	---	---	---
26	11.0	11.0	11.0	6.0	4.5	5.5	4.0	3.5	4.0	---	---	---
27	10.0	10.0	10.0	8.5	6.0	7.0	4.0	4.0	4.0	---	---	---
28	11.0	8.5	9.0	9.5	8.5	9.0	5.0	4.0	4.5	---	---	---
29	8.5	8.0	8.0	9.5	6.0	8.0	5.0	4.0	4.5	---	---	---
30	9.5	8.0	8.5	6.0	4.5	5.0	4.0	3.0	4.0	---	---	---
31	9.5	9.5	9.5	---	---	---	4.0	3.5	3.5	---	---	---
MONTH	15.5	8.0	11.5	9.5	4.5	6.5	8.0	3.0	5.0			

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	4.5	3.0	4.0	12.5	9.0	11.0	16.5	15.0	16.0
2	---	---	---	5.5	2.5	4.0	14.5	12.0	13.0	16.0	15.0	15.0
3	---	---	---	7.5	4.5	5.5	14.5	12.5	13.5	16.0	15.0	15.5
4	---	---	---	10.5	7.5	9.0	13.0	12.0	12.5	16.0	15.0	15.5
5	---	---	---	8.5	6.5	7.5	12.0	8.5	10.0	17.5	15.0	16.0
6	---	---	---	7.5	7.0	7.0	10.0	7.5	8.5	19.0	16.0	17.5
7	---	---	---	7.5	6.0	6.5	12.0	7.5	9.5	18.0	17.0	17.5
8	1.5	1.5	1.5	7.5	4.0	6.0	12.5	9.5	11.0	19.5	16.5	18.0
9	1.5	1.5	1.5	8.5	5.0	7.0	12.0	8.5	10.5	18.0	14.5	16.5
10	1.5	1.5	1.5	9.5	7.0	8.5	13.5	9.0	11.5	14.5	12.0	13.5
11	2.0	2.0	2.0	12.0	9.0	10.5	15.0	11.0	13.0	14.5	11.0	13.0
12	2.0	2.0	2.0	12.5	10.5	11.5	15.0	12.0	13.5	15.5	11.5	13.5
13	3.5	2.0	3.0	10.5	8.5	9.5	15.5	12.5	14.0	16.0	12.5	14.5
14	3.5	3.5	3.5	11.0	8.0	9.5	15.0	13.0	14.5	16.0	13.5	15.0
15	4.0	3.0	3.5	11.5	8.5	10.0	14.5	13.0	14.0	17.5	14.0	16.0
16	2.5	1.0	2.0	12.5	10.0	11.5	16.5	13.0	14.5	18.5	15.5	17.0
17	1.0	0.0	0.5	10.0	7.5	9.0	17.0	13.5	15.5	19.0	16.5	18.0
18	3.5	0.5	2.0	13.0	9.5	11.5	16.0	15.0	15.5	19.5	17.0	18.0
19	5.0	2.5	4.0	11.5	9.5	10.5	16.0	15.0	15.5	20.0	17.5	18.5
20	4.5	2.0	3.0	12.0	9.5	10.5	16.5	14.5	15.5	20.5	17.5	19.0
21	2.5	1.0	1.5	10.0	8.5	9.0	17.0	15.5	16.0	19.0	17.5	18.5
22	5.0	1.0	3.0	9.5	6.5	8.5	16.5	16.0	16.5	19.0	17.5	18.5
23	7.5	4.5	6.0	8.0	4.5	6.5	16.0	15.5	16.0	19.0	17.0	18.0
24	8.0	6.0	7.0	9.0	5.5	7.5	15.5	14.0	14.5	18.0	16.5	17.5
25	8.0	5.5	6.5	10.5	6.5	8.5	14.5	13.0	13.5	18.0	17.0	17.5
26	9.5	7.0	8.0	11.0	7.5	9.5	12.5	11.0	12.0	17.5	16.0	17.0
27	9.0	5.5	7.5	12.0	9.5	10.5	13.0	9.5	11.5	18.0	16.5	17.5
28	5.5	4.5	5.0	13.5	11.0	12.5	13.5	11.5	12.5	19.5	17.0	18.0
29	---	---	---	14.0	13.0	13.5	14.5	13.5	14.0	20.0	16.5	18.0
30	---	---	---	13.5	12.0	12.5	16.5	13.5	15.0	20.0	17.5	19.0
31	---	---	---	13.5	11.0	12.5	---	---	---	21.0	18.0	19.5
MONTH				14.0	2.5	9.0	17.0	7.5	13.5	21.0	11.0	17.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.0	19.5	20.5	20.5	18.5	19.5	23.5	22.0	22.5	22.0	20.0	21.0
2	20.5	18.0	19.5	20.5	18.0	19.5	24.0	21.0	22.5	22.0	20.0	21.0
3	21.0	17.5	19.0	20.5	17.0	19.0	23.0	22.0	22.5	22.5	20.5	21.5
4	21.5	17.5	19.5	21.5	18.5	20.0	23.5	21.0	22.0	22.5	21.0	21.5
5	21.5	18.0	20.0	21.0	19.0	20.0	24.0	21.5	22.5	22.5	21.0	22.0
6	21.5	19.0	20.0	22.0	19.5	20.5	24.5	22.0	23.0	21.5	20.5	21.0
7	19.5	17.0	18.5	23.5	20.5	22.0	25.5	22.5	24.0	21.0	18.5	20.0
8	18.0	15.0	17.0	23.5	20.5	22.5	25.0	22.5	23.5	18.5	18.0	18.0
9	19.5	16.0	17.5	23.5	21.5	22.5	23.5	19.5	21.5	19.0	17.5	18.0
10	18.5	15.5	17.0	23.5	21.5	22.5	21.5	19.5	20.5	19.0	17.5	18.5
11	18.0	15.5	17.0	23.0	21.0	22.0	22.5	20.0	21.5	19.0	17.5	18.0
12	20.0	17.5	18.5	22.5	21.0	22.0	23.5	21.0	22.5	18.0	15.5	17.0
13	21.5	18.5	20.0	23.5	20.5	22.0	23.0	22.0	22.5	18.5	17.0	17.5
14	21.0	18.5	19.5	24.0	21.5	23.0	23.0	21.0	22.0	19.0	17.5	18.5
15	20.5	18.5	19.5	25.0	22.0	23.5	22.5	21.0	21.5	19.5	18.0	18.5
16	21.5	19.0	20.0	24.5	22.0	23.5	22.0	20.5	21.5	19.5	19.0	19.0
17	19.5	18.5	19.0	24.0	22.0	23.0	21.5	18.5	20.0	19.0	18.0	18.5
18	20.0	18.5	19.0	24.0	22.0	23.0	19.0	17.5	18.5	19.0	17.5	18.5
19	19.5	17.5	18.5	24.5	21.5	23.0	18.5	16.5	17.5	18.5	17.5	18.0
20	18.5	17.0	18.0	25.0	22.0	23.5	19.0	16.5	17.5	19.0	17.5	18.0
21	18.0	16.5	17.0	25.5	22.5	24.0	19.0	16.5	18.0	18.0	16.5	17.5
22	18.0	16.0	17.0	24.5	21.5	23.5	20.5	18.0	19.0	17.5	16.0	17.0
23	18.5	16.5	17.5	23.5	20.5	22.0	20.5	18.5	19.5	18.5	16.5	17.5
24	19.0	16.5	17.5	24.0	22.0	23.0	20.0	19.0	19.5	18.5	17.0	18.0
25	17.5	16.0	17.0	23.0	21.5	22.0	20.5	18.5	19.5	18.0	17.5	18.0
26	16.5	16.0	16.0	23.0	21.0	22.0	21.5	19.5	20.5	18.0	17.5	18.0
27	18.0	16.0	16.5	22.5	20.5	22.0	21.0	20.0	20.5	17.5	16.5	16.5
28	19.0	16.5	17.5	23.0	21.0	22.0	22.0	19.5	21.0	17.5	16.0	16.5
29	19.0	17.0	18.0	22.0	21.0	21.5	22.0	20.0	21.0	16.5	14.5	15.5
30	20.5	17.5	19.0	23.0	20.5	21.5	22.0	20.5	21.5	16.5	15.0	16.0
31	---	---	---	23.5	21.0	22.0	22.5	20.5	21.5	---	---	---
MONTH	22.0	15.0	18.5	25.5	17.0	22.0	25.5	16.5	21.0	22.5	14.5	18.5
YEAR	25.5	0.0	13.0									

03498500 LITTLE RIVER NEAR MARYVILLE, TN

LOCATION.--Lat 35°47'10", long 83°53'04", Blount County, Hydrologic Unit 06010201, on right bank on downstream side of bridge on U. S. Highway 411, 0.8 mi (1.3 km) downstream from Crooked Creek, 5.0 mi (8.0 km) east of Maryville, and at mile 17.3 (27.8 km).

DRAINAGE AREA.--269 mi^2 (697 km^2).

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft (259.080 m) above mean sea level.

REMARKS.--Records good. Diurnal fluctuations at low flow caused by small mills above station. The town of Maryville diverted an average of about 2.5 ft^3/s (0.071 m^3/s) for municipal supply 300 ft (90 m) upstream from gage. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--26 years, 542 ft^3/s (15.35 m^3/s), 27.36 in/yr (695 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft^3/s (912 m^3/s) Mar. 12, 1963, gage height, 24.20 ft (7.376 m), from rating curve extended above 20,000 ft^3/s (566 m^3/s) on basis of area-velocity study and road overflow computations; minimum, 32 ft^3/s (0.91 m^3/s) Aug. 27, 1956; minimum gage height, 6.25 ft (1.905 m) Sept. 24, 1970; minimum daily, 44 ft^3/s (1.25 m^3/s) Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1875, reached a stage of 31 ft (9.4 m), discharge, 50,000 ft^3/s (1,420 m^3/s), and flood of April 1, 1896, reached a stage of 26 ft (7.9 m), discharge, 36,000 ft^3/s (1,020 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft^3/s (170 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 30	1730	6630	188	13.35	4.069	Aug. 17	2030	7210	204	13.81	4.209
Apr. 5	0530	*19500	552	20.92	6.376						

Minimum discharge, 71 ft^3/s (2.01 m^3/s) Aug. 8, gage height, 6.38 ft (1.945 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	386	467	595	932	230	818	1200	411	195	406	120	201
2	266	404	484	782	240	635	896	381	180	455	138	188
3	190	361	409	641	250	536	2590	386	170	344	127	167
4	157	324	361	544	230	644	4040	392	156	305	118	164
5	138	293	324	532	200	722	11600	343	148	276	111	151
6	124	264	314	520	190	1140	2910	308	148	260	105	209
7	281	245	1080	739	200	1150	1670	337	214	242	100	336
8	865	227	1110	608	216	873	1200	338	157	223	99	1900
9	1880	214	768	856	230	711	931	288	141	211	248	727
10	769	206	621	1760	227	611	775	266	136	205	386	504
11	445	197	557	979	217	549	665	255	127	214	276	407
12	336	219	849	804	232	728	587	243	128	187	176	330
13	275	201	1120	641	352	3230	535	232	148	195	159	285
14	238	185	864	608	302	1470	496	229	339	169	231	305
15	208	189	987	641	302	1000	461	221	236	156	204	570
16	189	193	1080	520	279	805	428	212	179	145	244	506
17	178	177	841	430	248	667	395	202	258	142	1820	804
18	169	174	675	450	263	597	371	195	213	139	2200	521
19	160	166	569	430	258	537	355	196	391	137	772	669
20	159	162	819	450	254	582	337	186	620	138	495	725
21	197	159	1100	420	241	487	317	180	891	138	374	479
22	166	155	753	400	233	548	300	179	617	127	310	395
23	152	148	641	450	240	501	405	191	1090	240	265	342
24	152	144	544	370	618	461	659	231	751	150	367	303
25	350	141	496	330	657	432	434	219	1610	145	386	275
26	1450	144	682	300	570	404	376	276	2590	242	282	527
27	731	214	582	450	1340	381	344	230	1450	167	244	563
28	502	864	532	370	1210	367	322	216	846	138	236	518
29	398	2220	490	300	---	394	330	287	605	128	206	394
30	361	925	432	330	---	4210	324	244	479	148	200	346
31	595	---	1400	290	---	2410	---	221	---	134	183	---
TOTAL	12467	9982	22079	17877	10029	28600	36253	8095	15213	6306	11182	13811
MEAN	402	333	712	577	358	923	1208	261	507	203	361	460
MAX	1880	2220	1400	1760	1340	4210	11600	411	2590	455	2200	1900
MIN	124	141	314	290	190	367	300	179	127	127	99	151
CFSM	1.49	1.24	2.65	2.15	1.33	3.43	4.49	.97	1.89	.76	1.34	1.71
IN.	1.72	1.38	3.05	2.47	1.39	3.96	5.01	1.12	2.10	.87	1.55	1.91

CAL YR 1976 TOTAL 175563 MEAN 480 MAX 3400 MIN 76 CFSM 1.78 IN 24.28
WTR YR 1977 TOTAL 191894 MEAN 526 MAX 11600 MIN 99 CFSM 1.96 IN 26.54

03499510 TENNESSEE RIVER AT FORT LOUDON DAM (TAILWATER), TN

LOCATION.--Lat 35°47'30", long 84°14'36", Loudon County, Hydrologic Unit 06010201, at downstream side of Fort Loudon Dam, 1.1 mi (1.8 km) northwest of Busselltown, 2.4 mi (3.9 km) southwest of Martel, and at mile 602.3 (969.1 km).

DRAINAGE AREA.--9,550 mi² (24,734 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by many reservoirs above site (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
NOV												
02...	0700	24000	200	7.5	15.0	9	3	6.5	7	--	--	24
16...	0730	27800	210	6.3	14.0	7	2	6.9	8	--	--	20
DEC												
14...	0730	23400	200	7.5	7.0	7	6	8.2	4	--	--	22
15...	1230	22800	--	--	7.0	--	--	--	--	1.2	30	--
JAN												
18...	0710	23000	210	7.5	3.0	11	19	10.6	2	--	--	--
MAR												
15...	0705	16000	220	8.0	11.0	8	5	10.3	10	--	--	31
JUN												
14...	0730	14000	180	7.5	21.0	5	9	5.1	3	--	--	25
SEP												
21...	0730	20000	190	7.5	25.0	10	12	3.0	11	--	--	--

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
NOV												
02...	5.0	12	2.1	66	54	37	15	.1	5.3	130	.18	8420
16...	4.6	12	1.4	68	56	25	15	<.1	4.8	120	.16	9010
DEC												
14...	5.3	12	1.5	76	62	21	14	.1	5.5	130	.18	8210
15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
18...	--	8.7	1.5	83	68	19	10	<.1	5.2	150	.20	9320
MAR												
15...	6.5	10	1.4	90	74	18	11	<.1	--	120	.16	5180
JUN												
14...	4.7	6.8	1.9	73	60	16	8.0	<.1	--	120	.16	4540
SEP												
21...	--	--	--	71	58	7.0	11	.1	--	110	.15	5940

03499510 TENNESSEE RIVER AT FORT LOUDON DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
NOV												
02...	1	.55	.08	.18	.06	--	--	--	--	--	--	--
16...	5	.56	.09	.16	.05	--	--	--	--	--	--	--
DEC												
14...	8	.55	.09	.15	.04	300	<2	<100	<10	320	<1	<5
15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
18...	13	.56	.16	.10	.05	--	--	--	--	--	--	--
MAR												
15...	9	.47	.13	.21	.05	300	--	<100	<10	--	<1	--
JUN												
14...	15	.62	.11	.15	.04	1200	--	<100	<10	--	<1	--
SEP												
21...	10	.49	<.01	.12	.05	--	--	--	--	--	--	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
NOV												
02...	--	370	--	--	80	--	--	--	--	--	--	--
16...	--	50	--	--	330	--	--	--	--	--	--	--
DEC												
14...	20	510	<10	<10	60	.3	<50	<1	<10	<1000	50	3.3
15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
18...	--	420	--	--	30	--	--	--	--	--	--	--
MAR												
15...	40	290	26	<10	40	<.2	<50	--	<10	<1000	30	3.0
JUN												
14...	<10	430	<10	<10	150	<.8	<50	--	<10	<1000	20	3.3
SEP												
21...	--	--	--	--	--	--	--	--	--	--	--	1.5

03518210 LITTLE TENNESSEE RIVER AT CHILHOWEE DAM, TN

LOCATION.--Lat 35°32'43", long 84°03'02", Monroe County, Hydrologic Unit 06010204, at Chilhowee Dam, 0.6 mi (1.0 km) southeast of Tallassee, 4.0 mi (6.4 km) northwest of Calderwood, and at mile 33.6 (54.1 km).

DRAINAGE AREA.--1,977 mi^2 (5,120 km^2).

PERIOD OF RECORD.--October 1976 to September 1977.

REMARKS.--Flow regulated by seven reservoirs (See stations 03517900, 03518200, and Water Resources Data for North Carolina, 1977).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
18...	1030	7596	30	5.4	17.7	5	1	7.0	5	--	--	2.0
NOV												
10...	0845	7356	--	--	13.0	--	--	--	--	1.0	<10	--
10...	0847	7356	--	--	13.0	--	--	--	--	1.4	<10	--
15...	1110	7234	28	7.0	12.0	10	2	6.4	4	--	--	2.0
DEC												
13...	0920	5960	22	6.5	8.0	3	2	7.5	1	--	--	2.0
JAN												
24...	1015	5775	21	6.4	4.0	5	2	11.2	2	--	--	1.0
FEB												
14...	1000	7009	28	6.3	4.0	7	1	10.9	<1	--	--	1.0
MAR												
14...	1130	1526	23	6.0	7.0	3	1	10.8	11	--	--	2.0
APR												
18...	0900	7732	20	6.4	9.0	3	2	10.4	1	--	--	--
MAY												
31...	1330	--	21	6.6	--	6	4	--	2	--	--	--
JUN												
13...	0930	1526	21	6.6	12.0	5	5	9.0	2	--	--	2.0
JUL												
18...	1345	8980	26	6.5	14.5	7	3	7.9	2	--	--	--
AUG												
15...	0935	4906	26	6.2	15.0	5	5	7.9	2	--	--	--
SEP												
19...	1400	6145	21	6.4	19.0	5	5	6.9	3	--	--	1.1

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
18...	.9	1.6	.6	10	8	2.0	3.0	<.1	7.2	20	.03	410
NOV												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
15...	.8	1.3	.6	46	38	2.0	3.0	<.1	6.5	20	.03	391
DEC												
13...	1.0	2.1	.4	10	8	1.0	2.0	<.1	6.0	20	.03	322
JAN												
24...	.6	1.0	.7	7	6	2.0	2.0	<.1	5.7	20	.03	312
FEB												
14...	.8	1.2	.6	10	8	--	--	<.1	--	--	--	--
MAR												
14...	1.0	2.3	.4	7	6	<1.0	2.0	<.1	--	20	.03	82.4
APR												
18...	--	--	--	9	7	--	--	--	--	--	--	--
MAY												
31...	--	--	--	7	6	--	--	--	--	--	--	--
JUN												
13...	.8	1.5	.7	9	7	2.0	2.0	<.1	--	30	.04	124
JUL												
18...	--	--	--	5	4	--	--	--	--	--	--	--
AUG												
15...	--	--	--	7	6	--	--	--	--	--	--	--
SEP												
19...	.9	1.0	.5	6	5	<1.0	2.0	<.1	--	10	.01	166

03518210 LITTLE TENNESSEE RIVER AT CHILHOWEE DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT												
18...	2	.12	.04	.06	.01	--	--	--	--	--	--	--
NOV												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
15...	2	.11	.07	.05	.03	--	--	--	--	--	--	--
DEC												
13...	3	.11	.07	.08	.02	200	<2	<100	<10	30	<1	<5
JAN												
24...	<1	.32	.01	.06	.01	--	--	--	--	--	--	--
FEB												
14...	<1	.18	.01	.01	.01	--	--	--	--	--	--	--
MAR												
14...	--	.14	.03	.04	.01	<200	--	<100	<10	--	<1	--
APR												
18...	--	.15	.12	.03	.01	--	--	--	--	--	--	--
MAY												
31...	--	.18	<.01	.07	.01	--	--	--	--	--	--	--
JUN												
13...	2	.19	<.01	.04	<.01	<200	--	<100	<10	--	3	--
JUL												
18...	--	.17	<.01	.03	<.01	--	--	--	--	--	--	--
AUG												
15...	--	.15	.01	.05	.01	--	--	--	--	--	--	--
SEP												
19...	3	.11	<.01	.04	.01	<200	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
18...	--	180	--	--	90	--	--	--	--	--	--	--
NOV												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	280	--	--	80	--	--	--	--	--	--	--
DEC												
13...	50	280	<10	<10	80	.2	<50	2	<10	<1000	110	1.0
JAN												
24...	--	200	--	--	20	--	--	--	--	--	--	--
FEB												
14...	--	270	--	--	40	--	--	--	--	--	--	--
MAR												
14...	90	100	21	<10	60	<.2	<50	--	<10	<1000	50	1.5
APR												
18...	--	100	--	--	20	--	--	--	--	--	--	--
MAY												
31...	--	<50	--	--	20	--	--	--	--	--	--	--
JUN												
13...	<10	200	120	<10	30	<.2	<50	--	<10	<1000	610	1.2
JUL												
18...	--	200	--	--	20	--	--	--	--	--	--	--
AUG												
15...	--	150	--	--	40	--	--	--	--	--	--	--
SEP												
19...	30	150	<10	<10	50	<1.0	<50	--	<10	<1000	20	1.7

03518300 LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN

LOCATION.--Lat 35°32'48", long 84°03'50", Blount County, Hydrologic Unit 06010204, on right bank on U. S. Highway 129, at Tallassee, 100 ft (30 m) upstream from Cochran Creek, 0.8 mi (1.3 km) downstream from Chilhowee Dam, 20 mi (32 km) south of Maryville, and at mile 32.8 (52.8 km). Records include inflow of Cochran Creek.

DRAINAGE AREA.--1,987 mi^2 (5,146 km^2), including Cochran Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 799.58 ft (243.712 m) above mean sea level.

REMARKS.--Water-discharge record good. Flow regulated by seven reservoirs (See stations 03517900, 03518200, and Water Resources Data for North Carolina, 1977).

AVERAGE DISCHARGE.--19 years, 4,999 ft^3/s (141.6 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft^3/s (1,180 m^3/s) May 28, 1973, gage height, 17.31 ft (5.276 m); minimum, 20 ft^3/s (0.57 m^3/s) Oct. 4, 1974, gage height, 5.46 ft (1.664 m); minimum daily, 26 ft^3/s (0.74 m^3/s) Aug. 30, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,700 ft^3/s (501 m^3/s) Apr. 5, gage height, 12.69 ft (3.868 m); minimum, 637 ft^3/s (18.0 m^3/s) Nov. 18, gage height, 6.43 ft (1.960 m); minimum daily, 1,290 ft^3/s (36.5 m^3/s Nov. 25, May 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7560	7640	2510	8000	4550	2100	2690	4840	5320	4680	3500	4080
2	7510	7590	1920	4530	5020	2230	1660	5380	3440	3390	4440	4750
3	6210	7540	1930	6450	1990	1440	4950	5640	4810	2470	4560	4370
4	6700	7920	2290	3780	1700	1690	4790	5560	2930	3400	4460	4420
5	7190	7640	1540	6170	2410	1730	14000	5700	3440	4500	4040	4840
6	4810	5710	2720	6650	7200	1340	4050	4480	5700	6360	4380	5690
7	6530	7730	3310	3830	5020	1360	1890	5520	3590	6200	3110	5770
8	6880	7630	5220	8280	5320	3510	3570	1290	3350	3330	5550	5740
9	7500	5970	5230	7330	3760	1480	3990	5270	3830	3930	3920	4730
10	7520	6130	3970	11100	2010	1380	3890	5680	3650	3990	4570	4680
11	7220	7040	4150	7270	1910	1340	5800	6090	4520	4550	5670	1470
12	7560	6590	2910	7920	2120	1410	7400	6130	3350	4740	5310	3360
13	7210	7110	4490	3510	2290	2530	7010	5100	4600	7080	4470	4890
14	7270	3070	5030	3330	2460	1440	7120	3980	3780	6060	4950	4830
15	7240	3010	2850	4020	5480	1300	7470	4700	3440	4850	6430	5630
16	7350	1570	3530	6010	6040	1300	6600	6410	4660	4210	5380	4570
17	6970	1360	2520	8470	5300	3490	7470	5920	3910	3410	5860	6080
18	7200	1370	1860	6520	1850	3110	6700	4470	4280	5110	4440	6070
19	7710	1430	1300	7490	2360	5330	4730	3650	1800	4960	1330	4640
20	6840	1350	1770	6880	2410	1510	6090	4550	4870	4890	3770	5300
21	5410	1330	7180	6960	5260	3150	5590	1960	4500	4080	2450	4540
22	7450	3340	3690	4440	1650	4760	6760	2260	5020	4330	5380	3770
23	7590	2650	3130	3580	1350	5720	4410	3610	4900	3830	4110	5100
24	7630	4140	2420	6720	1950	3330	2220	4460	5320	3350	6030	3020
25	7460	1290	1330	7630	1300	3500	5320	4660	4960	4410	5180	3990
26	7600	1310	1320	4800	1830	1600	5860	3520	3460	4410	5550	6460
27	7520	1350	1300	4560	1690	1300	5180	4620	4420	3680	5170	6010
28	7500	1440	1310	7260	2290	4170	5410	2640	5590	2060	4470	4250
29	7520	3910	2890	6000	---	3350	6600	2390	4680	4440	4450	5380
30	7470	3330	2290	2060	---	5900	6060	4300	4730	4970	4590	5690
31	7570	---	5350	4390	---	2910	---	6040	---	4070	5850	---
TOTAL	221700	129490	93260	185940	88520	80710	165280	140820	126850	135740	143370	144120
MEAN	7152	4316	3008	5998	3161	2604	5509	4543	4228	4379	4625	4804
MAX	7710	7920	7180	11100	7200	5900	14000	6410	5700	7080	6430	6460
MIN	4810	1290	1300	2060	1300	1300	1660	1290	1800	2060	1330	1470

CAL YR 1976 TOTAL 1860730 MEAN 5084 MAX 9080 MIN 1270
WTR YR 1977 TOTAL 1655800 MEAN 4536 MAX 14000 MIN 1290

03518300 LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since 1963.

REMARKS.--Flow regulated by seven reservoirs (See stations 03517900, 03518200, and Water Resources Data for North Carolina, 1977).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C Aug. 29, 1964; minimum, 2.5°C Feb. 27, 1970.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 19.5°C Oct. 5; minimum, 3.5°C on several days in January and February.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	18.0	18.0	15.5	15.0	15.5	10.5	9.5	10.0	6.0	5.5	6.0
2	18.5	18.0	18.0	15.5	14.5	15.0	10.5	9.5	10.0	6.0	5.5	6.0
3	18.5	18.0	18.0	15.0	14.5	15.0	10.5	9.0	9.5	5.5	5.5	5.5
4	19.0	18.0	18.5	15.0	14.5	14.5	10.0	9.0	9.5	5.5	5.5	5.5
5	19.5	18.0	18.5	14.5	14.0	14.5	10.0	9.0	9.5	5.5	5.5	5.5
6	19.0	18.5	18.5	14.5	13.5	14.0	9.5	9.0	9.0	5.5	5.5	5.5
7	19.0	18.5	18.5	14.0	13.5	13.5	9.0	9.0	9.0	6.0	5.5	5.5
8	18.5	18.5	18.5	14.0	13.0	13.5	9.0	8.5	8.5	5.5	5.5	5.5
9	18.5	18.0	18.5	13.5	13.0	13.5	9.0	8.5	8.5	5.5	5.5	5.5
10	18.5	18.0	18.0	13.5	13.0	13.0	8.5	8.5	8.5	5.5	5.0	5.5
11	18.5	18.0	18.0	13.5	13.0	13.0	8.5	8.5	8.5	5.5	4.5	5.0
12	18.5	17.0	18.0	13.5	13.0	13.0	8.5	8.5	8.5	5.0	4.5	5.0
13	18.5	17.0	18.0	13.0	12.0	13.0	8.5	8.0	8.5	5.5	4.5	4.5
14	18.5	17.0	18.0	12.0	12.0	12.0	9.0	8.5	8.5	5.0	5.0	5.0
15	18.5	17.0	18.0	12.0	11.5	12.0	9.0	8.5	8.5	5.5	4.5	5.0
16	18.0	18.0	18.0	12.0	11.5	11.5	9.0	8.5	8.5	5.0	4.5	4.5
17	18.0	17.0	18.0	12.0	11.0	11.5	9.0	8.0	8.5	5.0	4.0	4.5
18	18.0	17.0	17.0	13.0	11.0	11.5	9.0	8.0	8.5	4.5	4.0	4.0
19	17.0	16.5	17.0	12.0	11.0	11.5	9.0	8.0	8.5	4.5	3.5	4.0
20	17.0	16.5	16.5	11.5	11.0	11.5	8.5	8.0	8.5	4.0	4.0	4.0
21	16.5	16.0	16.5	11.5	11.0	11.0	8.0	8.0	8.0	4.5	3.5	4.0
22	16.5	16.0	16.0	11.5	10.5	11.0	8.0	7.0	8.0	4.5	3.5	4.0
23	16.5	16.0	16.0	11.5	10.5	11.0	8.0	7.0	7.0	4.5	3.5	4.0
24	16.5	16.5	16.5	11.0	10.5	11.0	8.0	6.5	7.0	4.0	4.0	4.0
25	16.5	16.5	16.5	11.5	10.5	11.0	6.5	6.5	6.5	4.5	4.0	4.0
26	16.5	16.0	16.5	11.0	10.5	11.0	7.0	6.5	6.5	4.5	4.0	4.0
27	16.5	16.0	16.0	11.5	10.5	11.0	7.0	6.5	6.5	4.5	4.5	4.5
28	16.0	15.5	16.0	11.0	10.5	11.0	7.0	6.0	6.5	4.5	4.0	4.0
29	15.5	15.5	15.5	10.5	10.0	10.5	6.5	6.0	6.5	4.5	4.0	4.0
30	15.5	15.5	15.5	10.5	10.0	10.0	6.5	6.0	6.0	4.5	4.0	4.0
31	15.5	15.5	15.5	---	---	---	6.0	6.0	6.0	4.5	3.5	4.0
MONTH	19.5	15.5	17.5	15.5	10.0	12.5	10.5	6.0	8.0	6.0	3.5	4.5

03518300 LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.5	3.5	4.0	7.0	6.0	6.5	11.0	9.0	10.0	10.0	8.5	9.0
2	4.5	3.5	3.5	8.0	5.5	6.5	11.0	9.5	10.0	9.0	8.5	9.0
3	4.0	3.5	3.5	7.0	6.5	6.5	11.5	9.5	10.5	10.5	8.5	9.5
4	4.5	3.5	4.0	8.5	6.5	7.0	12.0	10.5	11.0	10.5	9.0	9.5
5	4.5	4.0	4.0	8.0	6.5	7.0	12.0	10.5	11.5	11.0	9.0	9.5
6	4.5	4.0	4.0	7.0	6.5	7.0	11.5	10.0	11.0	11.0	9.0	10.0
7	4.5	3.5	4.0	8.0	6.5	7.0	11.5	10.0	10.5	10.5	9.0	9.5
8	4.5	3.5	4.0	8.0	6.0	7.0	11.5	9.5	10.5	11.0	9.0	10.0
9	4.5	3.5	4.0	8.5	6.5	7.0	11.0	9.5	10.5	11.5	9.0	10.0
10	4.5	3.5	4.0	9.0	6.5	8.0	12.0	9.5	10.5	11.5	9.0	10.0
11	4.5	3.5	4.0	10.0	8.0	9.0	12.0	10.0	11.0	11.5	9.0	10.5
12	4.0	4.0	4.0	9.0	8.5	8.5	12.0	10.5	11.0	11.5	9.0	10.5
13	5.0	4.0	4.5	9.5	8.0	8.5	12.0	10.5	11.0	11.5	9.0	10.5
14	5.0	4.0	4.5	10.0	8.0	9.0	11.5	10.0	10.5	11.5	9.0	10.0
15	5.0	4.0	4.5	10.5	8.5	9.5	11.5	10.0	10.5	11.5	9.5	10.5
16	5.0	4.0	4.5	10.0	8.5	9.5	11.5	10.0	10.5	11.5	9.5	10.5
17	5.0	4.0	4.5	10.0	8.5	9.5	11.0	9.5	10.5	11.5	9.5	10.5
18	5.5	4.5	5.0	10.0	9.0	9.5	10.0	9.0	9.5	12.0	10.0	10.5
19	5.5	4.5	5.0	10.5	9.5	10.0	10.0	8.5	9.0	11.5	10.0	10.5
20	5.0	4.5	4.5	11.0	9.5	10.5	10.0	8.5	9.0	11.5	10.0	11.0
21	5.5	4.5	5.0	10.0	9.5	10.0	10.0	8.0	9.0	12.0	10.0	11.0
22	6.0	4.5	5.0	10.0	9.5	9.5	9.5	8.5	9.0	12.0	10.5	11.0
23	6.0	5.0	5.5	10.5	9.5	10.0	9.5	8.5	9.0	12.0	10.5	11.0
24	6.5	5.5	6.0	10.0	9.0	9.5	9.5	8.5	9.0	13.0	11.0	11.5
25	6.5	5.5	6.0	10.5	9.0	9.5	9.5	8.5	9.0	13.0	11.0	11.5
26	7.0	5.5	6.0	10.5	8.5	9.5	9.5	8.0	9.0	13.0	11.0	11.5
27	6.5	6.0	6.5	10.0	8.5	9.5	10.5	8.5	9.5	13.0	11.0	12.0
28	7.0	6.0	6.5	11.0	9.5	10.0	10.0	8.5	9.0	13.0	11.0	12.0
29	---	---	---	10.0	9.5	10.0	10.0	8.5	9.0	14.0	11.0	12.0
30	---	---	---	11.0	10.0	10.5	10.0	8.5	9.5	14.0	11.5	12.0
31	---	---	---	11.0	10.5	10.0	---	---	---	13.0	11.5	12.0
MONTH	7.0	3.5	4.5	11.0	5.5	8.5	12.0	8.0	10.0	14.0	8.5	10.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	14.0	11.5	13.0	15.5	14.0	14.5	16.0	15.0	15.5	17.0	15.5	16.0
2	14.5	11.5	13.0	15.5	14.0	15.0	16.0	14.5	15.0	17.0	15.5	16.0
3	14.0	11.5	12.0	15.5	14.0	14.5	16.5	14.5	15.5	17.0	15.5	16.0
4	14.5	11.5	13.0	15.0	13.5	14.0	16.5	15.0	15.5	16.5	15.5	16.0
5	14.0	11.5	13.0	15.5	13.5	15.0	16.5	14.5	15.5	17.0	15.5	16.0
6	14.0	12.0	13.0	16.0	14.5	15.0	16.5	15.0	15.5	18.0	15.5	16.5
7	14.5	12.0	13.0	16.0	14.5	15.0	16.5	15.0	15.5	18.0	16.5	17.0
8	14.5	11.5	13.0	16.0	14.5	15.0	16.0	15.0	15.5	18.5	16.5	17.0
9	14.5	12.0	13.0	15.5	14.0	14.5	15.5	15.0	15.0	18.0	16.0	16.5
10	14.5	12.0	13.0	16.0	14.0	14.5	16.5	14.5	15.5	17.0	16.0	16.5
11	14.5	12.0	13.0	15.0	14.0	14.5	16.0	14.5	15.5	18.5	16.0	16.5
12	14.5	12.0	13.0	15.5	14.0	14.5	16.0	15.0	15.5	18.0	15.5	16.5
13	14.0	12.0	13.0	15.5	14.5	15.0	15.5	14.0	14.5	18.0	16.0	17.0
14	13.5	12.0	13.0	15.5	14.5	14.5	15.5	14.5	15.0	18.5	16.5	17.0
15	14.5	12.0	13.0	16.0	14.0	14.5	15.5	14.5	14.5	18.5	16.5	17.0
16	14.0	12.0	13.5	15.5	14.0	14.5	15.5	14.0	14.5	17.0	16.5	16.5
17	13.5	13.0	13.0	16.0	14.0	14.5	15.0	14.5	15.0	18.0	16.5	17.0
18	14.0	13.0	13.5	15.0	14.0	14.5	16.5	14.0	15.0	18.0	16.5	17.0
19	14.5	13.0	13.5	15.5	14.0	14.5	16.0	14.0	14.5	18.0	16.5	17.0
20	14.0	13.0	13.5	16.0	14.0	14.5	16.5	14.0	15.0	18.0	16.5	17.0
21	15.0	13.0	13.5	16.0	14.5	15.0	16.0	14.5	15.0	18.5	16.5	17.0
22	14.5	13.0	13.5	15.0	14.5	14.5	16.5	14.5	15.0	19.0	16.5	17.0
23	15.0	13.0	14.0	15.5	14.0	14.5	16.5	15.0	15.5	18.5	16.5	18.0
24	15.5	13.5	14.0	15.5	14.5	15.0	16.5	15.0	15.5	18.5	17.0	18.0
25	15.5	13.5	14.0	15.0	14.5	14.5	17.0	15.0	16.0	18.0	17.0	18.0
26	15.0	13.5	14.0	16.0	14.0	15.0	16.5	15.5	15.5	18.5	17.0	18.0
27	15.0	13.5	14.0	16.0	14.5	15.0	16.5	15.5	16.0	18.5	17.0	18.0
28	15.0	13.5	14.5	16.0	14.5	15.0	17.0	15.5	16.0	18.5	17.0	18.0
29	15.5	14.0	14.5	15.5	14.5	15.0	17.0	15.5	16.5	18.5	17.0	18.0
30	16.0	14.0	14.5	16.5	14.5	15.0	17.0	16.0	16.5	18.5	17.0	18.0
31	---	---	---	17.0	15.0	15.5	17.0	16.0	16.5	---	---	---
MONTH	16.0	11.5	13.5	17.0	13.5	14.5	17.0	14.0	15.5	19.0	15.5	17.0
YEAR	19.5	3.5	11.5									

03518500 TELLICO RIVER AT TELLICO PLAINS, TN

LOCATION.--Lat 35°21'42", long 84°16'44", Monroe County, Hydrologic Unit 06010204, on right bank 1,300 ft (400 m) upstream from bridge on Tellico Plains-Ballplay Road, 0.4 mi (0.6 km) downstream from Laurel Creek, 0.8 mi (1.3 km) east of Tellico Plains, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--118 mi^2 (306 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year. Published as "near Tellico Plains" October 1927 to September 1930.

REVISED RECORDS.--WSP 1336: 1927-28(M), 1936, 1940, 1944.

GAGE.--Water-stage recorder. Datum of gage is 846.64 ft (258.056 m) above mean sea level. July 20, 1925, to Sept. 30, 1927, nonrecording gage at same site and datum. Oct. 1, 1927 to Sept. 30, 1930, nonrecording gage at site 0.5 mi (0.8 km) upstream at datum 8.29 ft (2.527 m) higher.

REMARKS.--Water-discharge records good. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--52 years, 286 ft^3/s (8.100 m^3/s), 32.91 in/yr (836 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft^3/s (564 m^3/s) Mar. 16, 1973, gage height, 14.18 ft (4.322 m) from dross line in well, from rating curve extended above 12,000 ft^3/s (340 m^3/s) on basis of slope-area measurement of peak flow; minimum, 13 ft^3/s (0.37 m^3/s) Sept. 7, 1925, gage height, 0.25 ft (0.076 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1840 reached a stage of 15 ft (4.6 m), discharge, about 21,500 ft^3/s (609 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0115	4840	137	8.64	2.633	Apr. 4	2230	*12400	351	12.07	3.679

Minimum discharge, 36 ft^3/s (1.02 m^3/s) Aug. 7, gage height, 0.77 ft (0.235 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	226	250	437	150	398	609	197	138	117	65	95
2	90	184	206	367	160	316	484	200	128	154	60	85
3	82	162	179	329	160	273	1900	266	122	113	57	85
4	76	149	164	292	160	364	2650	294	114	103	55	78
5	71	138	153	274	140	319	3960	233	110	97	56	82
6	67	128	157	280	150	792	1360	209	108	94	52	162
7	189	123	517	461	140	641	873	227	142	89	49	650
8	280	116	459	378	151	459	698	243	107	83	50	960
9	448	112	329	584	166	377	580	197	102	78	345	305
10	204	110	270	871	132	331	507	209	97	86	183	209
11	142	108	252	477	129	298	450	174	94	78	107	174
12	119	137	459	383	167	608	410	166	116	73	84	148
13	106	113	572	334	254	2050	382	159	105	102	74	140
14	98	108	411	372	177	753	355	154	223	74	107	276
15	90	134	642	368	169	537	338	149	136	67	100	351
16	87	124	560	309	154	444	312	145	113	63	148	479
17	90	114	407	270	141	383	287	138	119	63	199	651
18	86	110	328	260	149	360	269	136	113	67	372	381
19	81	106	277	260	144	318	266	156	212	60	172	339
20	94	104	603	250	141	324	249	134	205	57	130	333
21	120	101	692	240	133	278	233	148	223	55	109	252
22	89	97	448	240	130	322	227	135	149	101	105	215
23	85	93	368	220	135	272	335	137	142	115	95	191
24	87	92	308	220	526	254	361	157	130	67	263	174
25	341	92	292	220	365	240	269	145	132	67	197	169
26	406	94	444	200	299	226	240	154	248	226	164	447
27	217	158	364	200	748	216	224	176	179	94	117	409
28	167	375	324	180	567	215	212	145	140	73	110	325
29	145	840	284	150	---	284	206	205	125	66	95	250
30	161	373	249	200	---	2340	197	254	123	79	90	219
31	353	---	624	170	---	1030	---	153	---	73	85	---
TOTAL	4772	4921	11592	9796	6037	16022	19443	5595	4195	2734	3895	8634
MEAN	154	164	374	316	216	517	648	180	140	88.2	126	288
MAX	448	840	692	871	748	2340	3960	294	248	226	372	960
MIN	67	92	153	150	129	215	197	134	94	55	49	78
CFSM	1.31	1.39	3.17	2.68	1.83	4.38	5.49	1.53	1.19	.75	1.07	2.44
IN.	1.50	1.55	3.65	3.09	1.90	5.05	6.13	1.76	1.32	.86	1.23	2.72

CAL YR 1976 TOTAL 113858 MEAN 311 MAX 3530 MIN 53 CFSM 2.64 IN 35.89
WTR YR 1977 TOTAL 97636 MEAN 267 MAX 3960 MIN 49 CFSM 2.26 IN 30.78

03518500 TELLICO RIVER AT TELLICO PLAINS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1964 to March 1972, January 1973 to current year.

INSTRUMENTATION.--Temperature recorder since July 1964.

REMARKS.--No record Jan. 31 to Mar. 1.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.--
WATER TEMPERATURES: Maximum, 31.0°C July 31, Aug. 2, 1964; minimum, 0.0°C many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 30.5°C July 7, 15, 20, 21; minimum, 0.0°C Jan. 17, but probably occurred also during period of missing record Jan. 31 to Mar. 1.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	15.5	17.0	11.0	8.5	9.5	3.0	0.5	1.5	3.0	0.5	1.0
2	19.5	14.5	17.0	9.5	6.5	8.5	4.0	1.0	2.0	0.5	0.5	0.5
3	19.0	14.0	16.5	9.5	6.5	8.0	4.0	1.5	3.0	1.5	0.5	1.0
4	19.5	15.0	17.0	9.5	6.0	8.0	4.5	1.5	3.0	5.0	1.5	3.5
5	20.0	15.0	18.0	7.0	4.5	6.0	4.5	2.0	3.5	5.5	5.0	5.0
6	19.0	16.5	18.5	6.5	3.5	5.0	4.5	2.0	3.5	5.0	5.0	5.0
7	19.0	17.0	18.0	8.5	4.5	6.0	7.0	4.5	6.5	5.0	3.5	4.5
8	17.0	16.0	16.5	6.5	3.5	5.0	7.0	4.0	5.5	3.5	2.0	3.0
9	16.0	13.5	15.0	6.5	3.0	4.5	4.0	2.0	3.0	6.0	3.5	4.5
10	15.0	11.5	13.5	9.0	4.5	6.5	5.0	2.0	3.5	6.0	1.0	4.0
11	15.0	10.5	13.0	8.0	5.5	6.5	7.0	5.0	6.0	1.0	0.5	0.5
12	15.0	10.0	13.0	7.0	4.5	6.0	9.0	7.0	8.5	0.5	0.5	0.5
13	16.0	10.5	13.5	5.0	3.5	4.5	9.0	6.5	8.0	1.0	0.5	0.5
14	16.5	12.0	14.5	4.5	3.0	4.0	6.5	4.5	5.5	4.5	1.0	2.0
15	15.5	10.5	13.5	5.5	4.0	5.0	8.0	4.5	6.0	5.0	3.5	4.5
16	14.5	11.5	13.0	7.0	5.0	6.0	8.5	7.0	8.0	3.5	0.5	1.5
17	14.0	11.5	13.0	8.0	5.5	6.5	7.0	5.0	6.0	0.5	0.0	0.5
18	13.5	9.5	11.5	8.5	5.0	6.5	6.0	5.0	5.5	0.5	0.5	0.5
19	12.0	8.0	10.0	8.0	5.0	6.5	7.0	5.5	6.0	0.5	0.5	0.5
20	12.0	10.5	11.0	8.5	6.5	8.0	8.5	6.5	7.0	0.5	0.5	0.5
21	13.0	9.5	11.0	8.0	5.0	6.5	7.0	2.0	4.5	0.5	0.5	0.5
22	11.5	7.0	9.5	5.5	3.5	4.5	2.0	0.5	1.0	0.5	0.5	0.5
23	11.0	7.0	9.5	4.5	1.5	3.0	3.5	1.5	2.0	0.5	0.5	0.5
24	12.0	10.0	11.0	4.5	1.5	3.5	3.0	1.5	2.0	0.5	0.5	0.5
25	13.0	11.5	12.0	6.0	2.0	4.0	3.5	1.5	2.0	0.5	0.5	0.5
26	13.0	10.5	12.0	8.0	4.5	6.0	5.0	3.5	4.5	0.5	0.5	0.5
27	11.0	9.0	10.0	11.0	8.0	9.5	4.5	3.5	4.0	0.5	0.5	0.5
28	9.5	7.0	8.5	11.0	10.0	10.5	6.0	4.0	5.0	1.5	0.5	1.0
29	9.0	5.5	7.0	10.0	4.0	7.0	5.5	2.0	4.5	1.0	0.5	0.5
30	10.0	7.0	8.5	4.0	1.0	3.0	3.0	1.0	2.0	1.0	0.5	0.5
31	10.5	9.5	10.0	---	---	---	4.5	3.0	4.0	---	---	---
MONTH	20.0	5.5	13.0	11.0	1.0	6.0	9.0	0.5	4.5	6.0	0.0	1.5

03518500 TELLICO RIVER AT TELLICO PLAINS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1				---	---	---	13.0	10.0	11.5	20.0	16.0	18.5
2				7.0	4.0	6.5	15.0	13.0	14.0	18.0	16.0	16.5
3				8.5	5.5	10.0	15.0	13.5	14.0	18.0	16.0	16.5
4				11.5	8.5	9.0	14.5	13.0	14.0	18.0	16.0	16.5
5				10.0	8.5	8.5	13.0	9.0	11.0	20.0	16.0	18.0
6				8.5	8.5	8.5	11.0	8.5	9.5	21.0	17.0	19.0
7				9.0	6.5	8.0	13.0	8.5	10.5	20.0	18.5	19.0
8				8.5	5.5	6.5	13.5	10.5	12.0	21.0	18.0	19.5
9				9.0	6.0	8.0	13.0	9.5	11.0	21.0	15.5	19.0
10				11.0	8.5	9.5	14.0	10.0	12.0	18.5	13.5	16.0
11				13.0	10.0	11.5	15.5	12.0	14.5	18.0	12.0	15.0
12				14.0	10.5	13.5	16.0	13.5	14.5	19.0	13.0	15.5
13				11.5	9.5	10.5	15.5	13.5	14.5	19.5	13.5	16.0
14				11.5	9.0	10.5	16.5	14.0	15.0	19.5	14.5	17.0
15				12.0	9.5	11.0	16.5	14.5	15.5	21.0	15.0	18.5
16				14.5	10.5	13.0	18.5	14.0	16.0	22.0	16.5	19.5
17				11.0	9.5	10.0	18.5	14.5	16.0	22.0	17.0	20.0
18				14.0	10.5	12.0	18.0	15.0	16.0	23.5	18.0	20.5
19				12.0	10.5	11.5	18.0	15.5	16.5	23.5	18.5	20.5
20				14.0	10.5	12.0	18.0	15.5	16.5	24.0	18.5	21.0
21				10.5	10.0	10.0	18.5	16.0	17.0	23.0	17.0	20.0
22				10.0	6.5	9.0	17.0	16.5	16.5	20.5	18.5	19.5
23				10.0	5.5	8.0	18.5	16.0	17.0	20.5	17.0	19.5
24				11.0	6.5	9.0	17.0	15.0	16.0	19.5	17.0	18.5
25				13.0	8.0	10.5	16.5	13.0	15.0	20.0	18.0	19.0
26				13.5	9.5	11.0	14.5	11.0	13.0	21.5	18.0	19.5
27				14.0	10.5	12.0	16.0	10.5	13.5	21.0	18.5	19.5
28				15.0	13.0	14.0	16.0	12.0	14.0	23.0	18.5	20.5
29				15.0	13.0	14.5	18.0	14.5	16.0	23.5	18.5	20.5
30				14.5	13.0	14.0	19.5	15.0	17.0	23.5	18.5	21.0
31				14.5	11.5	13.5	---	---	---	25.0	20.0	23.0
MONTH				15.0	4.0	10.5	19.5	8.5	14.5	25.0	12.0	19.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	21.0	24.0	27.0	23.5	25.0	28.5	24.0	26.5	28.0	23.0	25.0
2	25.0	19.0	21.5	27.0	22.0	24.5	29.0	23.5	26.0	28.0	22.0	25.0
3	25.5	18.5	21.5	28.0	21.0	24.0	28.5	24.0	26.0	28.0	22.0	25.0
4	25.5	18.5	21.5	29.0	21.5	25.0	28.0	23.5	25.5	28.0	22.0	25.5
5	26.5	19.0	22.0	27.0	22.0	25.0	29.5	24.0	26.5	28.0	23.5	25.5
6	25.0	20.0	22.0	29.5	23.0	26.0	29.5	24.0	26.5	24.5	22.0	23.5
7	24.0	19.0	21.0	30.0	23.5	26.5	29.5	25.0	27.0	23.0	19.5	21.5
8	23.0	16.0	19.5	30.5	23.5	27.0	28.5	24.5	26.0	21.5	19.0	20.0
9	23.5	16.5	19.5	29.5	24.0	27.0	26.0	20.5	23.0	23.0	20.0	21.0
10	23.5	16.0	19.5	29.5	24.0	26.5	25.5	20.0	22.0	23.0	20.0	21.0
11	23.5	16.0	19.5	28.5	23.5	26.0	28.5	21.5	25.0	24.0	19.0	21.0
12	24.0	19.0	21.0	26.5	24.0	25.5	28.0	23.0	25.5	23.0	18.0	20.0
13	26.5	19.5	23.5	29.5	23.0	26.0	28.0	23.5	25.5	23.0	18.5	20.0
14	24.5	20.0	21.0	30.0	23.5	26.5	27.0	23.5	25.0	21.5	19.0	20.0
15	24.5	19.5	21.0	30.5	25.0	28.0	26.0	23.0	24.5	22.0	19.0	20.5
16	26.0	20.0	23.5	29.0	24.5	27.0	25.5	22.0	24.0	20.5	19.0	20.0
17	23.5	21.0	22.0	29.0	24.5	26.0	24.5	21.5	23.0	20.5	18.5	19.5
18	25.0	20.5	23.0	29.0	23.5	26.5	24.0	20.5	22.0	20.5	18.5	19.5
19	24.0	21.0	22.0	29.5	24.0	27.0	24.0	20.0	21.5	19.5	18.5	19.0
20	22.0	20.0	21.0	30.5	24.5	28.0	25.0	19.5	22.0	21.0	18.5	19.5
21	23.0	19.0	21.0	30.5	25.0	28.5	25.0	20.0	22.0	21.0	18.0	19.0
22	25.0	20.0	22.0	26.5	23.0	25.0	26.5	21.0	24.0	21.0	17.0	19.0
23	26.0	21.0	23.0	28.5	23.0	25.5	26.0	21.5	24.0	21.5	18.0	19.5
24	28.0	21.5	24.5	27.0	23.5	25.5	24.5	23.5	21.5	21.0	18.5	20.0
25	26.5	22.0	24.5	25.0	22.0	24.5	25.5	20.5	23.0	20.5	19.0	19.5
26	23.5	21.0	22.0	26.0	21.5	24.0	26.5	21.0	23.5	19.5	18.5	19.0
27	25.5	20.5	23.5	27.0	21.5	25.0	26.5	23.0	24.5	19.0	18.0	18.5
28	27.0	21.5	24.5	26.5	22.0	24.5	28.0	22.0	25.0	20.5	16.5	18.5
29	26.5	22.0	24.5	24.0	22.0	23.5	28.0	22.0	25.0	18.0	16.5	17.0
30	27.0	23.0	25.0	28.0	22.0	25.0	28.5	23.0	25.5	18.5	16.5	18.0
31	---	---	---	28.0	22.0	26.0	27.0	23.0	25.5	---	---	---
MONTH	28.0	16.0	22.0	30.5	21.0	26.0	29.5	19.5	24.5	28.0	16.5	20.5
YEAR	30.5	0.0	14.5									

03519740 LITTLE TENNESSEE RIVER NEAR CENTERSVILLE, TN

LOCATION.--Lat 35°42'55", long 84°14'48", Loudon County, Hydrologic Unit 06010204, on right bank 200 ft (60 m) below Coytee Spring, 2.2 mi (3.5 km) west of Centersville, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--2,612 mi^2 (6,765 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1975 to current year.

INSTRUMENTATION.--Single point temperature recorder since November 1975.

REMARKS.--Clock stopped Oct. 1-5 (range in temperature 15.5 to 18.5°C), Jan. 24 to Feb. 1 (range in temperature 3.0 to 6.5°C), Apr. 5 to May 28 (range in temperature 10.0 to 16.0°C); no record Sept. 13-30. Flow regulated by seven reservoirs (see stations 03517900, 03518200, and Water Resources Data for North Carolina, 1977).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 21.5°C July 4, 1977; minimum, 2.0°C Jan. 17, 1977.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	14.5	13.0	14.0	7.0	5.5	6.5	5.5	4.5	5.0
2	---	---	---	14.5	12.0	14.0	9.0	6.5	8.0	5.5	3.5	4.5
3	---	---	---	14.0	13.0	13.5	8.0	6.5	7.0	4.5	3.5	4.0
4	---	---	---	14.0	12.0	13.5	8.5	6.5	8.0	6.5	3.5	5.0
5	---	---	---	13.5	12.0	13.0	9.0	6.5	8.0	6.0	5.0	5.5
6	19.0	18.0	18.0	13.0	11.0	12.0	8.5	7.0	8.0	5.5	5.0	5.5
7	18.5	18.0	18.0	13.0	11.5	12.0	8.5	7.0	8.0	6.0	5.0	5.5
8	18.0	17.0	17.0	12.0	10.5	11.5	8.0	7.0	7.0	5.5	4.0	5.0
9	17.0	16.0	16.5	12.0	11.0	11.5	7.0	5.5	6.5	5.5	5.0	5.0
10	17.0	15.5	16.5	13.0	11.5	12.0	8.0	6.0	7.0	5.0	4.0	4.5
11	17.0	15.5	16.5	12.0	11.0	11.5	8.5	6.0	7.0	4.5	3.5	4.0
12	17.0	15.5	16.5	11.5	11.0	11.0	9.0	7.0	8.5	4.5	4.0	4.0
13	18.0	15.5	16.5	11.0	10.5	11.0	8.5	8.0	8.5	5.0	4.0	4.5
14	18.0	15.5	17.0	11.0	9.5	10.5	8.0	6.0	7.0	6.0	5.0	5.5
15	18.0	15.5	16.5	10.5	9.5	10.0	8.5	6.5	8.0	6.0	5.0	5.5
16	18.0	16.5	17.0	11.0	9.5	10.0	8.5	7.0	8.0	6.0	3.5	5.0
17	17.0	16.0	16.5	10.5	9.5	10.0	8.5	7.0	8.0	4.0	2.0	3.5
18	16.5	15.0	16.0	10.5	9.5	10.0	8.5	8.0	8.5	4.0	3.0	3.5
19	16.5	15.0	16.0	10.5	9.5	10.0	9.0	7.0	8.5	4.5	3.0	3.5
20	16.5	15.5	16.0	10.5	10.0	10.5	9.0	7.0	8.5	5.0	3.5	4.0
21	15.5	14.0	15.0	10.0	9.0	9.5	9.0	6.5	8.5	5.0	4.0	4.0
22	15.5	14.0	15.0	9.0	8.0	8.5	6.5	5.5	6.0	4.5	3.5	4.0
23	16.0	14.0	15.0	9.5	8.0	8.5	6.0	5.0	5.5	4.0	3.5	4.0
24	16.0	15.5	15.5	9.5	8.0	8.5	6.5	4.5	5.5	---	---	---
25	15.5	15.5	15.5	10.5	9.0	9.5	6.0	5.0	5.5	---	---	---
26	15.5	14.5	15.0	9.5	9.5	9.5	6.0	5.5	5.5	---	---	---
27	14.5	14.0	14.0	11.0	9.5	10.5	6.0	4.5	5.5	---	---	---
28	14.5	13.0	14.0	11.0	10.5	10.5	6.0	5.0	5.5	---	---	---
29	14.5	13.0	14.0	10.5	7.0	9.0	6.5	5.5	6.0	---	---	---
30	14.5	13.5	14.0	8.0	6.5	7.0	6.5	6.0	6.0	---	---	---
31	14.0	13.5	14.0	---	---	---	6.0	4.0	5.0	---	---	---
MONTH	19.0	13.0	16.0	14.5	6.5	11.0	9.0	4.0	7.0			

03519740 LITTLE TENNESSEE RIVER NEAR CENTERSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	8.5	6.0	7.0	14.0	12.0	13.5	---	---	---
2	4.0	3.0	3.5	7.0	5.5	6.0	14.0	12.0	13.0	---	---	---
3	5.0	4.0	4.5	8.5	6.5	8.0	14.0	13.0	13.5	---	---	---
4	6.0	3.5	5.0	10.5	8.5	9.5	13.5	12.0	13.0	---	---	---
5	7.0	5.5	6.0	10.5	9.5	10.0	---	---	---	---	---	---
6	5.5	3.0	4.0	9.5	8.0	9.0	---	---	---	---	---	---
7	4.5	3.0	3.5	9.0	8.0	8.5	---	---	---	---	---	---
8	4.0	3.0	3.5	9.0	8.0	8.5	---	---	---	---	---	---
9	5.0	3.5	4.0	9.5	8.0	8.5	---	---	---	---	---	---
10	6.0	4.5	5.0	10.5	8.5	9.5	---	---	---	---	---	---
11	6.5	5.0	5.5	11.5	10.0	11.0	---	---	---	---	---	---
12	6.5	5.5	6.0	13.0	11.0	11.5	---	---	---	---	---	---
13	6.5	5.0	6.0	12.0	11.0	11.5	---	---	---	---	---	---
14	7.0	5.0	6.0	12.0	10.0	11.0	---	---	---	---	---	---
15	8.0	4.5	6.0	13.0	10.5	11.5	---	---	---	---	---	---
16	5.0	4.5	4.5	13.5	11.5	13.0	---	---	---	---	---	---
17	5.0	4.0	4.5	13.0	9.5	11.5	---	---	---	---	---	---
18	6.5	5.0	5.5	13.0	10.0	11.5	---	---	---	---	---	---
19	8.0	6.0	7.0	11.5	9.5	10.5	---	---	---	---	---	---
20	7.0	5.5	6.0	12.0	10.0	11.0	---	---	---	---	---	---
21	6.0	4.5	5.0	11.5	9.5	11.0	---	---	---	---	---	---
22	8.0	4.5	7.0	10.0	9.0	9.5	---	---	---	---	---	---
23	9.0	6.5	9.0	10.0	8.0	9.0	---	---	---	---	---	---
24	10.0	9.0	5.5	10.5	9.0	10.0	---	---	---	---	---	---
25	9.5	8.0	9.0	11.0	9.5	10.0	---	---	---	---	---	---
26	10.5	8.5	9.5	13.0	10.0	11.0	---	---	---	---	---	---
27	10.0	9.0	9.5	13.0	10.5	11.5	---	---	---	---	---	---
28	9.0	8.0	8.5	13.5	11.5	13.0	---	---	---	---	---	---
29	---	---	---	13.5	11.0	12.0	---	---	---	17.0	15.5	16.0
30	---	---	---	13.5	11.5	13.0	---	---	---	19.0	16.0	17.0
31	---	---	---	14.0	13.0	13.5	---	---	---	17.0	13.5	15.5
MONTH	10.5	3.0	6.0	14.0	5.5	10.5						
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.0	13.5	15.5	19.0	15.5	16.5	19.0	16.0	17.0	20.0	16.5	19.0
2	16.5	13.5	15.0	18.5	15.0	16.5	19.5	16.0	17.0	20.5	16.5	19.0
3	17.0	14.0	16.0	18.5	16.0	18.0	19.0	16.0	18.0	20.5	17.0	19.0
4	18.0	14.0	16.0	21.5	18.0	19.5	19.0	15.5	18.0	20.0	17.0	19.0
5	18.5	16.0	17.0	20.0	16.0	19.0	19.5	16.0	18.0	20.5	17.0	19.0
6	18.5	15.5	17.0	18.5	15.5	17.0	20.0	16.0	18.5	19.0	17.0	18.5
7	16.5	13.5	15.5	19.0	15.0	17.0	20.0	15.5	18.0	18.5	17.0	18.0
8	16.5	14.5	16.0	19.5	15.5	17.0	19.0	17.0	18.5	20.0	18.0	19.0
9	16.5	14.5	16.0	19.5	17.0	19.0	17.0	17.0	17.0	19.5	18.0	19.0
10	16.5	14.0	15.5	19.5	16.0	18.5	19.5	16.0	18.0	19.0	17.0	18.5
11	16.5	14.0	15.5	19.5	16.0	18.5	19.0	16.0	18.0	19.0	16.0	18.0
12	16.5	14.5	15.5	18.0	16.0	17.0	19.0	16.0	18.0	20.5	18.0	19.0
13	16.5	15.5	16.0	18.0	15.0	16.5	19.0	15.5	18.0	---	---	---
14	16.5	15.0	16.0	18.0	15.5	16.5	18.5	16.0	16.5	---	---	---
15	18.0	14.5	16.0	19.5	15.0	17.0	18.0	16.0	17.0	---	---	---
16	18.0	15.0	16.5	19.0	15.0	17.0	19.0	15.5	17.0	---	---	---
17	16.5	14.0	15.0	18.5	15.5	17.0	18.0	16.0	16.5	---	---	---
18	17.0	15.0	16.0	18.5	15.5	17.0	20.0	17.0	18.0	---	---	---
19	18.0	15.0	16.0	18.5	15.0	16.5	19.5	17.0	17.0	---	---	---
20	20.5	16.0	18.5	19.0	15.0	17.0	21.0	17.0	19.0	---	---	---
21	18.0	14.5	16.0	19.0	15.0	17.0	19.0	15.5	18.0	---	---	---
22	18.0	15.0	16.0	19.0	16.0	17.0	20.5	16.5	19.0	---	---	---
23	18.5	15.0	16.0	19.0	15.0	17.0	19.5	16.0	18.0	---	---	---
24	19.0	14.5	16.5	19.0	16.0	17.0	18.5	16.5	17.0	---	---	---
25	18.5	14.0	16.0	18.0	15.5	17.0	20.0	16.0	18.5	---	---	---
26	19.0	15.0	17.0	19.0	15.0	17.0	19.0	16.0	18.0	---	---	---
27	19.0	16.0	18.0	19.0	15.5	17.0	19.5	16.0	18.5	---	---	---
28	18.5	15.5	17.0	19.0	15.5	17.0	20.0	16.5	19.0	---	---	---
29	19.0	15.0	17.0	18.5	15.5	17.0	20.0	16.0	18.5	---	---	---
30	19.0	15.0	17.0	18.5	15.5	17.0	20.5	16.5	19.0	---	---	---
31	---	---	---	18.5	16.0	18.0	20.0	16.5	18.5	---	---	---
MONTH	20.5	13.5	16.0	21.5	15.0	17.5	21.0	15.5	18.0			
YEAR												

03528000 CLINCH RIVER ABOVE TAZEWELL, TN

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, Hydrologic Unit 06010205, on right bank 0.4 mile (0.6 km) upstream from Grissom Island, 4.6 mi (7.4 km) downstream from Big War Creek, 10 mi (16 km) east of Tazewell, and at mile 159.8 (257.1 km).

DRAINAGE AREA.--1,474 mi^2 (3,818 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to current year. Published as "near Lone Mountain" October 1918 to September 1927; as "near Tazewell" August 1927 to December 1936; and as "above Tazewell" July 1935 to current year. Prior to April 1919 monthly discharge only, published in WSP 1306. Gage-height record "near Tazewell" January 1937 to July 1941.

REVISED RECORDS.--WSP 803: Drainage area at site "near Tazewell". WSP 1306: Drainage area at site "near Lone Mountain". WSP 1336: 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,060.7 ft (323.30 m) above mean sea level. Apr. 1, 1919, to Sept. 30, 1927, nonrecording gage on railroad bridge 23.3 mi (37.5 km) downstream at datum 102.7 ft (31.30 m) lower. Aug. 8, 1927, to July 16, 1941, water-stage recorder at site 8.0 mi (12.9 km) downstream at datum 47.2 ft (14.39 m) lower. Water-stage recorder at present site and datum since July 29, 1935.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--59 years, 2,093 ft^3/s (59.27 m^3/s), 19.28 in/yr (490 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,100 ft^3/s (2,780 m^3/s) Apr. 5, 1977, gage height, 29.32 ft (8.937 m), from floodmarks; minimum, 108 ft^3/s (3.06 m^3/s) Sept. 11, 1925; minimum gage height at present site and datum, 0.33 ft (0.101 m) Sept. 20, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1862 reached a stage of about 24 ft (7.3 m), present site and datum, from information by local resident; discharge, about 66,000 ft^3/s (1,870 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 98,100 ft^3/s (2,780 m^3/s) at about 1800 hours Apr. 5, gage height, 29.32 ft (8.937 m), from floodmark, no other peak above base of 14,000 ft^3/s (396 m^3/s); minimum, 289 ft^3/s (8.18 m^3/s) Sept. 4, 5, gage height, 0.85 ft (0.259 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2220	1970	1910	2350	851	4130	3820	2340	546	1470	401	329
2	2620	1820	1590	2370	811	3300	2870	1940	559	1320	379	315
3	2590	1600	1350	2070	746	2640	4160	1640	580	1140	362	314
4	1790	1380	1190	1900	723	2480	19800	1460	487	1170	340	298
5	1180	1220	1040	1770	794	3120	83300	1350	439	916	322	294
6	885	1090	943	1610	756	3290	65200	1370	408	752	308	301
7	758	979	2080	1590	769	2920	26100	1440	419	650	321	325
8	1230	883	5160	1580	729	2490	9680	1780	491	578	373	391
9	4260	811	6090	1540	729	2140	6280	1490	1110	528	397	413
10	10300	758	4190	1680	675	1900	4770	1270	832	496	370	438
11	10400	724	3010	1840	688	1720	3880	1090	648	1230	482	411
12	4450	726	3100	1860	812	1660	3290	972	655	979	490	392
13	2460	731	4190	1530	1130	6390	2870	890	614	959	412	366
14	1760	714	4250	1590	1720	8630	2580	827	537	751	386	338
15	1360	690	3750	1860	2400	6050	2350	779	523	580	676	370
16	1120	675	3080	2510	2510	4130	2140	736	592	481	1100	344
17	960	666	2570	2820	2190	3130	1930	698	525	422	1560	474
18	844	674	2160	2830	1780	2590	1650	660	620	384	1720	485
19	776	681	1840	2810	1540	2300	1520	634	595	359	1190	468
20	728	668	1740	2820	1460	2250	1420	617	591	333	1200	438
21	688	645	2210	2750	1590	2290	1350	584	630	323	999	494
22	630	624	2190	1490	1550	2340	1280	560	736	323	716	456
23	597	607	1990	1360	1420	2700	1260	578	899	357	581	391
24	573	590	1750	1250	1880	2730	1440	562	1040	403	556	344
25	1970	569	1590	1190	5080	2460	1980	560	2610	592	566	314
26	6270	556	1460	1140	7210	2170	1790	538	2170	4250	525	309
27	7250	550	1440	1080	5310	1930	1520	524	2420	1090	550	336
28	5020	727	1380	1030	4750	1750	1340	514	1950	623	511	368
29	2920	1900	1360	727	---	1630	1720	532	1470	495	435	340
30	2140	2230	1320	815	---	2720	2510	492	1320	441	377	317
31	1970	---	1620	869	---	5270	---	489	---	419	342	---
TOTAL	82719	28458	73543	54631	52603	95250	265800	29916	27016	24814	18947	11173
MEAN	2668	949	2372	1762	1879	3073	8860	965	901	800	611	372
MAX	10400	2230	6090	2830	7210	8630	83300	2340	2610	4250	1720	494
MIN	573	550	943	727	675	1630	1260	489	408	323	308	294
CFSM	1.81	.64	1.61	1.20	1.28	2.09	6.01	.66	.61	.54	.42	.25
IN.	2.09	.72	1.86	1.38	1.33	2.40	6.71	.76	.68	.63	.48	.28

CAL YR 1976 TOTAL 645957 MEAN 1765 MAX 16200 MIN 170 CFSM 1.20 IN 16.30
WTR YR 1977 TOTAL 764870 MEAN 2096 MAX 83300 MIN 294 CFSM 1.42 IN 19.30

03528000 CLINCH RIVER ABOVE TAZEWELL, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-65, 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1962 to September 1965, April 1971 to September 1975.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 31.0°C June 20, 23, 24, 1964; minimum, 0.0°C many days during winter months of 1963-65.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
12...	1450	3780	220	7.6	14.0	13	65	9.8	14	--	--
13...	1615	--	--	--	--	--	--	--	--	1.1	--
20...	1530	755	300	--	12.0	--	--	--	--	--	--
NOV											
10...	1040	758	280	7.2	6.2	5	1	13.5	5	--	--
DEC											
08...	1100	5230	240	7.3	4.5	8	34	11.8	5	--	--
14...	1300	4390	250	--	6.5	--	--	--	--	--	--
FEB											
08...	1230	653	300	--	1.0	--	--	--	--	--	--
15...	1015	2350	310	7.3	1.9	8	8	14.6	5	1.3	660
MAR											
09...	1100	2210	230	--	9.0	--	--	--	--	--	--
MAY											
18...	1445	639	270	7.6	25.0	7	1	9.2	5	1.4	6200
JUN											
22...	1245	696	300	--	26.0	--	--	--	--	--	--
AUG											
10...	1255	371	--	8.1	27.5	10	11	7.9	5	1.4	2200

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
12...	--	36	3.9	3.6	1.4	111	91	21	4.0	<.1
13...	850	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	--	36	16	3.7	1.1	146	120	32	5.0	<.1
DEC										
08...	--	34	7.8	3.4	1.2	146	120	21	6.0	<.1
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	<10	36	9.4	5.2	1.6	159	130	17	5.0	<.1
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	100	39	9.9	4.3	1.4	159	130	23	3.0	<.1
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	300	40	15	5.8	2.5	134	110	28	6.0	<.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
12...	6.5	130	.18	1330	72	1.2	.02	.18	.07	.03
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	3.7	170	.23	348	4	.64	.03	.26	.02	.11
DEC										
08...	3.0	140	.19	1980	50	.51	.01	.17	.06	.06
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	1.0	160	.22	1020	5	.79	.03	.12	.02	--
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	150	.20	259	43	.13	.02	.13	.01	--
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	180	.24	180	17	.27	.08	.19	.23	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
12...	--	--	--	--	--	--	--	--	3000	70
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	700	<2	<100	<10	30	<1	<5	70	150	<50
DEC										
08...	--	--	--	--	--	--	--	--	710	100
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	400	--	<100	<10	80	<1	--	60	420	--
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	300	--	<100	<10	--	<1	--	60	420	<50
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	<200	--	<100	<10	--	<1	--	70	2200	<50

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
12...	--	--	180	10	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	<10	20	<10	<10	<.2	<50	<1	<10	50	1.2
DEC										
08...	--	--	80	<10	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	<10	40	70	--	<.2	<50	<1	<10	<10	1.9
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	<10	<10	20	<10	<.2	<50	--	<10	50	1.6
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	<10	<10	40	<10	<.2	<50	--	<10	30	3.9

03532000 POWELL RIVER NEAR ARTHUR, TN

LOCATION.--Lat 36°32'30", long 83°37'49", Claiborne County, Hydrologic Unit 06010206, on left bank 500 ft (150 m) upstream from bridge on U. S. Highway 25E, 2.3 mi (3.7 km) east of Arthur, 2.4 mi (3.9 km) downstream from Indian Creek, and at mile 65.4 (105.2 km).

DRAINAGE AREA.--685 mi^2 (1,774 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1919 to current year. Gage-height records collected at same site December 1892 to August 1893, September 1904 to March 1925 are in reports of U. S. Weather Bureau (published as "near Tazewell").

REVISED RECORDS.--WSP 1336: 1920, 1921(M), 1923.

GAGE.--Water-stage recorder. Datum of gage is 1,043.84 ft (318.162 m) above mean sea level, Tennessee River Survey datum. Prior to July 23, 1927, nonrecording gage, and July 23, 1927, to Sept. 30, 1970, water-stage recorder, at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge records good.

AVERAGE DISCHARGE.--58 years, 1,147 ft^3/s (32.48 m^3/s), 22.74 in/yr (578 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft^3/s (1,690 m^3/s) Apr. 6, 1977, gage height, 38.96 ft (11.875 m), from floodmark; minimum, 47 ft^3/s (1.33 m^3/s) Jan. 6, 1940, result of freezeup; minimum daily, 60 ft^3/s (1.70 m^3/s) Sept. 23, 1955; minimum gage height, 1.32 ft (0.402 m) Sept. 6, 1975, result of dredging.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1826 reached a stage of 29.5 ft (8.99 m) present datum, discharge, 34,000 ft^3/s (963 m^3/s), and flood of Jan. 29, 1918, reached a stage of 29.2 ft (8.90 m) present datum, discharge, 33,000 ft^3/s (935 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59,500 ft^3/s (1,690 m^3/s) at about 0400 hours Apr. 6, gage height, 38.96 ft (11.875 m), from floodmark, no other peak above base of 9,000 ft^3/s (255 m^3/s); minimum, 180 ft^3/s (5.10 m^3/s) Feb. 8, gage height, 1.65 ft (0.503 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	976	990	751	415	2160	1890	1470	293	515	221	221
2	869	966	769	878	396	1670	1550	1170	266	452	218	249
3	503	826	640	670	407	1350	2130	990	283	407	218	227
4	385	719	573	701	385	1330	13400	869	249	422	215	249
5	293	636	499	692	430	1680	38900	774	233	363	215	276
6	233	560	456	688	441	1900	50300	705	230	309	215	266
7	218	495	1160	710	385	1640	15800	769	227	276	215	227
8	224	441	2160	701	327	1390	5270	760	227	249	215	227
9	719	400	2500	679	342	1180	3500	719	349	233	221	227
10	2790	374	1660	705	363	1040	2600	611	286	227	224	221
11	2030	353	1220	883	392	935	2090	539	236	227	356	227
12	1010	353	1190	999	464	886	1750	491	243	230	389	218
13	679	339	1690	826	755	2230	1490	456	240	293	316	215
14	511	329	1810	779	985	4170	1320	422	240	249	356	215
15	415	319	1650	865	1100	3160	1190	396	230	227	1050	215
16	353	303	1370	1230	1050	2120	1080	378	392	224	1430	215
17	316	296	1160	1350	961	1630	976	356	339	221	1030	218
18	283	290	985	1080	826	1360	892	339	319	221	2420	456
19	256	280	850	845	746	1220	836	329	276	221	1790	602
20	243	266	769	887	728	1160	788	316	356	218	1070	407
21	230	259	901	874	751	1150	714	303	283	218	751	339
22	212	246	990	765	710	1190	657	349	286	218	564	290
23	206	236	901	688	653	1300	653	370	468	218	449	246
24	212	227	793	649	878	1390	860	303	636	224	381	221
25	765	224	765	606	1790	1270	1050	293	2330	283	367	218
26	3480	218	705	590	2560	1140	957	296	1510	548	385	218
27	3150	227	683	556	1960	1020	807	299	1280	793	389	227
28	1650	243	683	527	2160	937	710	290	1050	479	306	236
29	1080	560	670	483	---	878	976	280	783	322	263	249
30	826	905	666	342	---	1030	1590	280	606	249	233	266
31	874	---	692	353	---	2210	---	280	---	224	221	---
TOTAL	26485	12866	32550	23352	23360	47726	156726	16202	14746	9560	16693	7888
MEAN	854	429	1050	753	834	1540	5224	523	492	308	538	263
MAX	3480	976	2500	1350	2560	4170	50300	1470	2330	793	2420	602
MIN	206	218	456	342	327	878	653	280	227	218	215	215
CFSM	1.25	.63	1.53	1.10	1.22	2.25	7.63	.76	.72	.45	.79	.38
IN.	1.44	.70	1.77	1.27	1.27	2.59	8.51	.88	.80	.52	.91	.43

CAL YR 1976 TOTAL 321218 MEAN 878 MAX 12500 MIN 82 CFSM 1.28 IN 17.44
WTR YR 1977 TOTAL 388154 MEAN 1063 MAX 50300 MIN 206 CFSM 1.55 IN 21.08

03532000 POWELL RIVER NEAR ARTHUR, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-65, 1971 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1962 to September 1965, April 1971 to September 1975.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 29.0°C July 20, 22, 23, 24, 1972; minimum, 0.0°C Jan. 16, 1972, Jan. 13, 1973.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
11...	1225	1860	210	7.2	13.8	14	160	9.8	17	--	--
13...	1530	645	--	--	15.5	--	--	--	--	1.9	--
20...	1215	239	290	--	11.0	--	--	--	--	--	--
NOV											
10...	1215	378	270	7.7	7.3	2	1	12.5	4	--	--
DEC											
08...	1250	2080	260	7.4	5.3	4	19	11.7	8	--	--
14...	1500	1870	260	--	7.0	--	--	--	--	--	--
FEB											
08...	1500	232	300	--	1.0	--	--	--	--	--	--
15...	1255	1110	320	6.1	5.0	8	6	15.2	6	1.1	<10
MAR											
09...	1500	1220	240	--	11.0	--	--	--	--	--	--
MAY											
18...	1100	336	270	7.3	22.0	5	1	8.5	4	1.5	11800
JUN											
22...	1530	250	290	--	26.0	--	--	--	--	--	--
AUG											
10...	1050	197	310	7.8	25.7	9	12	7.4	6	1.1	5200
SEP											
25...	1030	211	280	--	19.0	--	--	--	--	--	--

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
11...	--	31	7.8	3.9	2.2	82	67	44	9.0	<.1
13...	900	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	--	32	16	5.8	1.1	122	100	40	3.0	<.1
DEC										
08...	--	37	8.1	4.6	1.0	134	110	23	5.0	<.1
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	<10	37	9.3	7.8	1.5	146	120	21	4.0	<.1
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	100	38	13	7.9	1.5	122	100	38	3.0	<.1
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	400	50	15	8.5	2.2	171	140	28	4.0	<.1
SEP										
25...	--	--	--	--	--	--	--	--	--	--

03532000 POWELL RIVER NEAR ARTHUR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)
OCT										
11...	6.0	150	.20	753	580	.81	.03	.20	.17	.10
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	4.9	160	.22	163	4	.59	.04	.07	.04	.23
DEC										
08...	3.8	170	.23	955	14	.64	.02	.15	.04	.02
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	.7	160	.22	480	3	.82	.02	.13	.02	--
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	160	.22	145	10	.13	.03	.11	.01	--
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	210	.29	112	19	.66	.04	.10	.04	--
SEP										
25...	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
11...	--	--	--	--	--	--	--	--	19000	60
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	800	<2	<100	<10	--	<1	<5	100	430	<50
DEC										
08...	--	--	--	--	--	--	--	--	890	150
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	300	--	<100	<10	90	<1	--	<10	530	--
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	400	--	<100	<10	--	<1	--	20	530	<50
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	<200	--	100	<10	--	<1	--	40	590	<50
SEP										
25...	--	--	--	--	--	--	--	--	--	--

03532000 POWELL RIVER NEAR ARTHUR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
11...	--	--	420	30	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
NOV										
10...	<10	<10	<10	30	<.2	<50	<1	<10	110	1.2
DEC										
08...	--	--	90	30	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
15...	<10	<10	70	--	<.2	<50	<1	<10	<10	2.0
MAR										
09...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	<10	<10	40	<10	<.2	<50	--	<10	130	2.3
JUN										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	<10	<10	40	20	<.2	<50	--	<10	120	1.7
SEP										
25...	--	--	--	--	--	--	--	--	--	--

03532190 OLLIS CREEK AT IVYDELL, TN

LOCATION.--Lat 36°23'34", long 84°07'53", Campbell County, Hydrologic Unit 06010205, 0.7 mi (1.1 km) northwest of LaFollette, 3.6 mi (5.8 km) southwest of Kilsyth, 5.1 mi (8.2 km) southwest of Duff, and at mile 0.24 (0.39 km).

DRAINAGE AREA.--13.3 mi^2 (34.4 km^2).

PERIOD OF RECORD.--Water years 1973-74, 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT												
26...	1200	53	190	5.2	10.0	1	3	5	--	--	--	--
NOV												
23...	0955	3.7	--	--	7.2	--	--	--	<1.0	<10	--	--
DEC												
06...	1230	8.0	220	6.2	3.0	2	2	3	--	--	15	15
JAN												
04...	1330	16	180	5.1	3.0	1	1	<1	--	--	10	11
FEB												
28...	1330	32	170	4.8	3.0	2	1	11	--	--	--	--
MAR												
21...	1300	23	120	5.4	6.0	1	2	2	--	--	--	--
APR												
25...	1300	21	150	5.9	14.0	2	2	2	--	--	14	8.1
MAY												
23...	1400	6.0	180	5.5	19.0	<1	4	4	--	--	--	--
JUN												
27...	1330	32	200	5.8	21.0	4	1	4	--	--	--	--
JUL												
25...	1330	--	230	6.1	25.0	5	1	1	--	--	20	13
AUG												
22...	1100	--	190	6.2	21.0	2	3	7	--	--	--	--
SEP												
12...	1100	--	230	6.4	24.0	5	3	--	--	--	20	10

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)
OCT												
26...	--	--	2	2	100	3.0	--	5.8	140	.19	20.0	5
NOV												
23...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	5.0	1.3	5	4	93	3.0	.1	5.9	150	.20	3.24	<1
JAN												
04...	2.6	1.0	2	2	84	2.0	.1	6.2	140	.19	6.05	2
FEB												
28...	--	--	1	1	--	2.0	--	--	--	--	--	--
MAR												
21...	--	--	2	2	--	--	--	--	--	--	--	--
APR												
25...	2.2	1.0	5	4	52	2.0	<.1	--	110	.15	6.24	<1
MAY												
23...	--	--	4	3	--	--	--	--	--	--	--	--
JUN												
27...	--	--	2	2	--	--	--	--	--	--	--	--
JUL												
25...	2.9	1.8	10	8	110	2.0	.1	--	150	.20	--	<1
AUG												
22...	--	--	7	6	--	--	--	--	--	--	--	--
SEP												
12...	3.2	1.6	10	8	90	4.0	.1	--	160	.22	--	5

03532190 OLLIS CREEK AT IVYDELL, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT												
26...	.04	.03	.05	<.01	--	--	--	--	--	--	--	--
NOV												
23...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
06...	.06	.07	.02	.01	300	<2	<100	<10	70	<1	<5	140
JAN												
04...	.03	.04	<.01	.01	--	--	--	--	--	--	--	--
FEB												
28...	.05	.04	.11	.03	--	--	--	--	--	--	--	--
MAR												
21...	.03	.03	<.01	.01	--	--	--	--	--	--	--	--
APR												
25...	.03	.01	.03	.01	800	<2	<100	<10	160	<1	<5	340
MAY												
23...	.07	.01	.09	.01	--	--	--	--	--	--	--	--
JUN												
27...	.07	.02	<.01	.01	--	--	--	--	--	--	--	--
JUL												
25...	.02	.02	<.01	.01	<200	6	<100	<10	80	<1	<5	70
AUG												
22...	.01	.05	.01	<.01	--	--	--	--	--	--	--	--
SEP												
12...	.01	.02	.01	.01	<200	<2	<100	<10	100	<1	<5	40

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT											
26...	--	--	--	--	--	--	--	--	--	--	--
NOV											
23...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	80	<10	<10	2200	.3	50	1	<10	<1000	200	.8
JAN											
04...	250	--	--	1600	--	--	--	--	--	--	--
FEB											
28...	310	--	--	330	--	--	--	--	--	--	--
MAR											
21...	150	--	--	840	--	--	--	--	--	--	--
APR											
25...	400	<10	<10	1300	.2	<50	<1	<10	<1000	180	.4
MAY											
23...	570	--	--	1400	--	--	--	--	--	--	--
JUN											
27...	210	--	--	1800	--	--	--	--	--	--	--
JUL											
25...	250	<10	<10	250	<.4	<50	<2	<10	<1000	100	1.8
AUG											
22...	410	--	--	870	--	--	--	--	--	--	--
SEP											
12...	440	<10	<10	990	.2	<50	<2	<10	<1000	70	1.5

03533000 CLINCH RIVER BELOW NORRIS DAM, TN

LOCATION.--Lat 36°12'56", long 84°04'56", Anderson County, Hydrologic Unit 06010207, 0.5 mi (0.8 km) upstream from Clear Creek, 0.8 mi (1.3 km) below Norris Dam, 1.5 mi (2.4 km) north of Norris, and at mile 78.8 (126.8 km).

DRAINAGE AREA.--2,913 mi^2 (7,545 km^2).

PERIOD OF RECORD.--Water years 1972-73, 1976 to current year.

REMARKS.--Flow regulated by Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)
OCT												
18...	0620	6000	240	6.8	18.0	2	3	.6	7	31	8.6	3.2
NOV												
14...	1730	5000	240	6.5	14.5	5	2	5.6	6	26	8.4	3.3
DEC												
05...	1550	3170	230	7.9	12.0	2	2	7.9	3	28	9.3	3.4
JAN												
16...	1700	8300	240	7.9	6.0	5	2	9.6	3	32	9.3	3.4
FEB												
13...	1545	3560	240	7.9	4.0	5	2	9.3	4	31	9.4	3.4
MAR												
15...	0830	3800	240	8.1	5.0	3	1	10.7	4	38	12	4.0
APR												
18...	0830	9000	240	7.9	8.0	3	4	9.4	1	--	--	--
MAY												
16...	0500	300	240	7.3	8.0	10	24	7.7	2	--	--	--
JUN												
12...	1530	7500	170	7.6	12.0	10	23	5.9	1	28	6.5	3.0
JUL												
17...	1630	7500	180	7.3	12.0	5	8	3.7	4	--	--	--
AUG												
14...	1900	4100	190	7.3	12.0	7	10	2.8	3	--	--	--
SEP												
25...	1700	6000	220	7.1	10.0	5	4	1.3	4	32	9.6	2.4

DATE	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT												
18...	1.2	134	110	20	5.0	<.1	4.7	140	.19	2270	5	.19
NOV												
14...	1.2	120	98	24	4.0	<.1	3.3	160	.22	2160	2	.49
DEC												
05...	1.1	122	100	7.0	4.0	<.1	2.0	140	.19	1200	<1	.28
JAN												
16...	1.3	122	100	22	5.0	<.1	1.4	140	.19	3140	3	.23
FEB												
13...	1.4	122	100	--	--	<.1	--	--	--	--	<1	.33
MAR												
15...	1.3	134	110	19	3.0	--	--	130	.18	1330	1	.27
APR												
18...	--	122	100	--	--	--	--	--	--	--	--	.51
MAY												
16...	--	122	100	--	--	--	--	--	--	--	--	.64
JUN												
12...	2.2	88	72	19	3.0	<.1	--	130	.18	2630	8	.73
JUL												
17...	--	88	72	--	--	--	--	--	--	--	--	.82
AUG												
14...	--	93	76	--	--	--	--	--	--	--	--	.69
SEP												
25...	1.0	120	98	18	4.0	<.1	--	130	.18	2110	4	.37

03533000 CLINCH RIVER BELOW NORRIS DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
18...	.03	.19	.01	--	--	--	--	--	--	--	--
NOV											
14...	.06	.16	.04	--	--	--	--	--	--	--	--
DEC											
05...	.05	.06	<.01	400	<2	<100	<10	30	<1	<5	90
JAN											
16...	<.01	.08	.01	--	--	--	--	--	--	--	--
FEB											
13...	.02	.06	.01	--	--	--	--	--	--	--	--
MAR											
15...	.03	.07	.01	<200	--	<100	<10	--	<1	--	20
APR											
18...	.04	.05	.01	--	--	--	--	--	--	--	--
MAY											
16...	<.01	.08	.03	--	--	--	--	--	--	--	--
JUN											
12...	.01	.02	.01	2800	--	<100	<10	--	<1	--	<10
JUL											
17...	.03	.16	.02	--	--	--	--	--	--	--	--
AUG											
14...	.01	.04	.01	--	--	--	--	--	--	--	--
SEP											
25...	.03	.41	.01	<200	--	<100	<10	--	<1	--	20

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT											
18...	180	--	--	500	--	--	--	--	--	--	--
NOV											
14...	240	--	--	70	--	--	--	--	--	--	--
DEC											
05...	190	<10	<10	50	.2	<50	<1	<10	<1000	80	1.4
JAN											
16...	50	--	--	<10	--	--	--	--	--	--	--
FEB											
13...	150	--	--	<10	--	--	--	--	--	--	--
MAR											
15...	<50	25	<10	<10	<.2	<50	--	<10	<1000	20	1.9
APR											
18...	90	--	--	10	--	--	--	--	--	--	--
MAY											
16...	840	--	--	20	--	--	--	--	--	--	--
JUN											
12...	260	<10	<10	10	<.2	<50	--	<10	<1000	150	2.3
JUL											
17...	710	--	--	30	--	--	--	--	--	--	--
AUG											
14...	370	--	--	10	--	--	--	--	--	--	--
SEP											
25...	180	<10	<10	250	.3	<50	--	<10	<1000	40	.4

03534100 CLINCH RIVER NEAR CLINTON, TN

LOCATION.--Lat 36°07'22", long 86°06'52", Anderson County, Hydrologic Unit 06010207, at bridge on State Route 61, 0.8 mi (1.3 km) northeast of Clinton, 0.5 mi (.8 km) upstream from Hinds Creek, and at mile 66.3 (106.7 km).

DRAINAGE AREA.--2,980 mi^2 (7,718 km^2).

PERIOD OF RECORD.--October 1976 to September 1977.

REMARKS.--Flow regulated by Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT												
13...	1330	4670	--	--	16.8	--	--	--	1.0	<10	--	--
27...	0700	11200	250	8.1	15.0	2	5	6	--	--	--	--
DEC												
07...	1200	6500	230	7.9	12.0	3	4	3	--	--	30	8.9
JAN												
03...	1200	6460	240	7.8	9.0	5	1	2	--	--	32	9.2
FEB												
22...	1330	4310	240	7.9	12.0	5	1	6	--	--	--	--
APR												
28...	1132	6160	220	7.8	12.9	2	45	6	--	--	30	9.0
MAY												
24...	1400	6320	220	7.6	14.0	6	40	5	--	--	--	--
JUN												
28...	1200	4690	200	7.8	15.0	6	20	7	--	--	--	--
JUL												
19...	1400	--	220	7.0	16.0	10	2	2	--	--	38	6.8
AUG												
30...	1000	--	200	6.8	16.0	3	6	5	--	--	--	--
SEP												
27...	1649	--	270	7.4	20.0	5	50	10	--	--	--	--

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE, (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	122	100	32	3.0	<.1	4.8	140	.19	4230	2
DEC												
07...	4.3	1.0	122	100	22	4.0	<.1	1.9	150	.20	2630	3
JAN												
03...	3.6	1.4	121	99	24	2.0	<.1	1.6	160	.22	2790	1
FEB												
22...	--	--	122	100	--	--	--	--	--	--	--	--
APR												
28...	4.7	1.2	115	94	18	4.0	.1	--	150	.20	2500	2
MAY												
24...	--	--	104	85	--	--	--	--	--	--	--	--
JUN												
28...	--	--	95	78	--	--	--	--	--	--	--	--
JUL												
19...	2.4	1.4	84	69	28	5.0	.8	--	140	.19	--	1
AUG												
30...	--	--	100	82	--	--	--	--	--	--	--	--
SEP												
27...	--	--	121	99	--	--	--	--	--	--	--	--

03534100 CLINCH RIVER NEAR CLINTON, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
27...	.41	.05	.17	.02	--	--	--	--	--	--	--	--
DEC												
07...	.28	.02	.08	.01	100	<2	<100	<10	40	<1	<5	600
JAN												
03...	.23	.01	.19	.01	--	--	--	--	--	--	--	--
FEB												
22...	.25	.10	.02	.02	--	--	--	--	--	--	--	--
APR												
28...	.52	.01	.07	.03	1000	<2	<100	<10	100	<1	<5	5400
MAY												
24...	.64	.17	<.01	.03	--	--	--	--	--	--	--	--
JUN												
28...	.72	.01	.19	.02	--	--	--	--	--	--	--	--
JUL												
19...	.72	.01	.13	<.01	300	<2	<100	<10	130	<1	<5	20
AUG												
30...	.63	.01	.03	.01	--	--	--	--	--	--	--	--
SEP												
27...	.45	.02	.10	.03	--	--	--	--	--	--	--	--

DATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT											
13...	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
07...	120	21	<10	20	.4	<50	<1	<10	<1000	200	2.1
JAN											
03...	90	--	--	<10	--	--	--	--	--	--	--
FEB											
22...	200	--	--	40	--	--	--	--	--	--	--
APR											
28...	1400	27	<10	90	<.2	<50	<1	<10	<1000	80	1.6
MAY											
24...	1600	--	--	60	--	--	--	--	--	--	--
JUN											
28...	970	--	--	30	--	--	--	--	--	--	--
JUL											
19...	150	<10	20	<10	.2	<50	1	<10	<1000	50	1.0
AUG											
30...	130	--	--	20	--	--	--	--	--	--	--
SEP											
27...	530	--	--	330	--	--	--	--	--	--	--

03534900 CLINCH RIVER AT EDGEMOOR, TN

LOCATION.--Lat 36°01'32", long 84°10'03", Anderson County, Hydrologic Unit 06010207, 0.5 mi (0.8 km) downstream from Edgemoor Bridge, 3.5 mi (5.6 km) southwest of South Clinton, 4.2 mi (6.8 km) northeast of Oak Ridge, and at mile 48.6 (78.2 km).

DRAINAGE AREA.--3,089 mi^2 (8,000 km^2).

PERIOD OF RECORD.--Water years 1968 to current year.

REMARKS.--Site located in Melton Hill Lake. Flow regulated by Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)
OCT												
05...	1320	1380	240	7.6	18.9	8	6	4	--	--	34	8.7
13...	1300	4690	--	--	17.8	--	--	--	1.4	<10	--	--
NOV												
02...	1200	4770	240	7.8	--	5	3	6	--	--	20	5.0
DEC												
07...	1130	4360	220	7.9	11.1	7	4	3	--	--	27	9.2
JAN												
04...	1400	4700	240	8.0	7.8	2	3	3	--	--	31	9.3
FEB												
01...	1000	7010	230	8.0	1.7	5	2	3	--	--	31	9.7
MAR												
01...	0930	130	250	7.4	10.6	5	3	14	--	--	33	9.6
APR												
05...	1000	4370	94	7.5	15.0	45	500	6	--	--	14	3.5
MAY												
03...	1100	5440	230	--	12.8	4	21	3	--	--	--	--
JUN												
07...	1030	4790	200	--	16.7	9	28	2	--	--	--	--
JUL												
05...	1100	--	200	--	18.3	8	13	7	--	--	25	7.0
AUG												
11...	1030	--	200	--	12.8	5	17	2	--	--	--	--
SEP												
06...	1145	--	210	--	16.7	4	3	3	--	--	29	7.0

DATE	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)
OCT												
05...	4.0	4.1	122	100	14	4.0	<.1	4.8	130	.18	484	7
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
02...	2.1	.8	134	110	20	5.0	<.1	4.7	140	.19	1800	3
DEC												
07...	3.4	1.1	122	100	21	4.0	<.1	1.9	140	.19	1650	4
JAN												
04...	3.6	1.3	120	98	13	4.0	<.1	1.7	--	--	--	2
FEB												
01...	4.4	1.5	122	100	18	5.0	<.1	1.8	170	.23	3220	3
MAR												
01...	4.3	1.7	122	100	31	4.0	<.1	1.4	160	.22	56.2	3
APR												
05...	1.6	9.4	46	38	40	3.0	<.1	5.6	90	.12	1060	440
MAY												
03...	--	--	--	--	--	--	--	--	140	.19	2060	28
JUN												
07...	--	--	--	--	--	--	--	--	130	.18	1680	19
JUL												
05...	2.3	2.0	--	--	18	3.0	.9	--	130	.18	--	17
AUG												
11...	--	--	--	--	--	--	--	--	110	.15	--	9
SEP												
06...	2.2	1.3	--	--	15	3.0	<.1	--	130	.18	--	7

03534900 CLINCH RIVER AT EDGEMOOR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
OCT												
05...	.26	.06	.06	.01	<.01	400	<5	<100	<10	170	<1	<5
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
02...	.49	.02	.14	.04	--	--	<2	--	--	--	<1	17
DEC												
07...	.28	.03	.13	.03	--	600	<2	<100	10	20	<1	<5
JAN												
04...	.23	.04	.07	.02	--	<200	<2	<100	<10	90	1	<5
FEB												
01...	.24	.14	--	--	--	<200	<4	<100	<10	40	<1	<5
MAR												
01...	.28	.02	.14	.03	--	300	<2	<100	<10	60	<1	<5
APR												
05...	.25	.08	.42	.41	--	22000	9	<100	<10	160	<1	<5
MAY												
03...	.59	.08	.05	.03	--	--	<2	--	--	--	<1	<5
JUN												
07...	--	--	--	--	--	--	<2	--	--	--	<1	<5
JUL												
05...	.61	.03	.05	.02	--	1400	<2	<100	<10	90	<1	<5
AUG												
11...	.72	.02	.04	.03	--	--	8	--	--	--	<1	<5
SEP												
06...	.69	.03	.04	.01	--	730	<4	<100	10	40	<1	25

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
05...	<10	280	<10	<10	70	<.2	<50	<1	80	<1000	10	2.4
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
02...	40	260	19	--	40	.4	<50	<2	--	--	10	--
DEC												
07...	20	790	<10	<10	70	<.2	<50	1	<10	<1000	40	1.2
JAN												
04...	30	170	<10	<10	<10	<.2	<50	1	<10	<1000	<10	1.5
FEB												
01...	<10	200	<10	<10	40	--	<50	<1	<10	<1000	<10	1.3
MAR												
01...	40	410	<10	<10	90	<.2	<50	<1	<10	<1000	10	1.7
APR												
05...	60	8600	12	<10	450	<.2	<50	1	<10	<1000	90	13
MAY												
03...	30	1300	<10	--	60	<.2	<50	<1	--	--	<10	--
JUN												
07...	60	500	<10	--	60	<.2	<50	<1	--	--	<10	--
JUL												
05...	<10	1600	<10	<10	50	<.2	<50	<1	<10	<1000	10	1.4
AUG												
11...	80	590	<10	--	70	<.2	<50	<1	--	--	20	--
SEP												
06...	20	380	14	<10	90	.4	<50	<1	<10	<1000	30	3.2

03535000 BULLRUN CREEK NEAR HALLS CROSSROADS, TN

LOCATION.--Lat 36°06'52", long 83°59'16", Knox County, Hydrologic Unit 06010207, on left bank on downstream side of bridge on U. S. Highway 441, 2.1 mi (3.4 km) downstream from Smith Branch, 4 mi (6 km) northwest of Halls Crossroads, and at mile 16.3 (26.2 km).

DRAINAGE AREA.--68.5 mi^2 (177.4 km^2).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.91 ft (260.577 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--20 years, 101 ft^3/s (2.860 m^3/s), 20.02 in/yr (509 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft^3/s (518 m^3/s) Apr. 4, 1977, gage height, 13.28 ft (4.048 m), from rating curve extended above 5,000 ft^3/s (142 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 2.5 ft^3/s (0.071 m^3/s) Aug. 12, 1974, caused by regulation upstream of unknown origin.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0830	1560	44.2	7.85	2.393	Apr. 4	2130	*18300	518	13.28	4.048
Mar. 30	2400	2200	62.3	8.45	2.576						

Minimum discharge, 8.6 ft^3/s (0.24 m^3/s) Sept. 4, 5, 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	78	80	108	33	87	347	42	20	38	11	10
2	26	56	61	92	32	70	228	52	19	47	10	9.6
3	18	45	49	93	31	61	972	45	19	31	10	9.1
4	15	38	41	83	30	112	7400	45	18	27	19	8.8
5	13	33	35	67	35	130	4070	40	18	24	14	9.0
6	13	29	48	76	31	115	872	37	18	23	11	8.8
7	37	26	450	96	29	101	346	36	19	22	9.6	12
8	31	23	205	85	31	85	217	35	19	20	9.2	27
9	238	22	122	85	31	74	159	32	18	19	14	15
10	82	21	91	136	29	66	130	30	18	18	19	12
11	45	20	82	119	24	60	111	30	17	20	13	11
12	31	21	210	117	47	215	96	29	17	18	11	9.7
13	25	20	184	95	72	1040	85	28	18	17	9.8	9.9
14	21	19	128	111	48	268	78	27	37	16	12	13
15	18	20	113	97	44	175	72	27	25	15	13	28
16	17	19	97	85	36	134	66	26	20	14	11	24
17	17	18	78	75	31	110	61	25	18	13	13	45
18	16	17	66	68	32	99	57	24	18	13	28	40
19	14	16	57	64	30	84	54	24	25	12	17	28
20	15	16	64	60	30	109	51	24	37	12	12	27
21	18	15	69	56	28	87	48	23	30	12	10	18
22	15	14	55	52	27	97	47	26	25	11	9.6	15
23	14	14	55	48	28	87	56	27	33	12	9.3	14
24	14	14	48	45	85	79	71	24	40	11	23	13
25	341	14	45	43	72	72	50	25	97	31	20	14
26	358	14	53	42	59	65	45	25	167	33	12	48
27	106	22	61	56	123	60	42	25	116	16	10	61
28	66	135	60	46	117	59	40	24	75	12	9.9	49
29	49	263	64	41	---	59	52	26	49	12	11	28
30	52	120	59	37	---	947	45	22	39	13	11	22
31	135	---	136	35	---	1470	---	21	---	12	9.4	---
TOTAL	1917	1182	2966	2313	1245	6277	15968	926	1089	594	401.8	638.9
MEAN	61.8	39.4	95.7	74.6	44.5	202	532	29.9	36.3	19.2	13.0	21.3
MAX	358	263	450	136	123	1470	7400	52	167	47	28	61
MIN	13	14	35	35	24	59	40	21	17	11	9.2	8.8
CFSM	.90	.58	1.40	1.09	.65	2.95	7.77	.44	.53	.28	.19	.31
IN.	1.04	.64	1.61	1.26	.68	3.41	8.67	.50	.59	.32	.22	.35

CAL YR 1976 TOTAL 24126.4 MEAN 65.9 MAX 897 MIN 6.9 CFSM .96 IN 13.10
WTR YR 1977 TOTAL 35517.7 MEAN 97.3 MAX 7400 MIN 8.8 CFSM 1.42 IN 19.29

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN

LOCATION.--Lat 35°53'07", long 84°18'03", Roane County, Hydrologic Unit 06010201, at downstream side of Melton Hill Dam, 1.4 mi (2.2 km) downstream from Hope Creek, and at mile 23.1 (37.2 km).

DRAINAGE AREA.--3,343 mi^2 (8,658 km^2).

PERIOD OF RECORD.--Water years 1973 to current year.

REMARKS.--Site located in Watts Bar Lake. Flow regulated by Melton Hill Lake (station 03535900) and Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
13...	1115	--	170	7.7	18.3	--	--	7.4	--	<1.0	10	--
NOV												
01...	0800	10900	240	8.0	14.4	--	2	8.2	7	--	--	--
15...	0745	10000	250	7.0	12.0	7	1	--	7	--	--	32
16...	0700	10000	--	--	11.0	--	--	7.0	--	--	--	--
DEC												
13...	0800	9000	230	7.9	9.0	3	2	--	3	--	--	30
JAN												
17...	0800	21000	240	7.8	3.0	6	5	9.8	4	--	--	34
FEB												
14...	0745	9500	240	8.1	5.0	5	2	11.1	4	--	--	31
MAR												
11...	1120	10000	--	--	9.0	--	--	10.0	--	--	--	--
14...	0805	16800	240	7.5	9.0	4	5	--	4	--	--	35
APR												
18...	0745	10800	240	7.9	12.0	5	7	--	2	--	--	--
MAY												
16...	0800	5000	280	7.2	10.0	5	15	10.9	2	--	--	--
JUN												
13...	0800	5000	210	7.7	18.0	15	19	6.8	4	--	--	29
JUL												
25...	0755	8200	200	7.5	19.0	10	17	8.2	4	--	--	--
AUG												
15...	0800	5000	200	7.6	24.0	7	13	5.2	6	--	--	--
SEP												
19...	0800	5000	200	7.3	19.0	5	15	5.9	6	--	--	33

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
01...	--	--	--	146	120	19	4.0	--	4.4	150	.20	4410
15...	9.7	3.4	1.4	134	110	23	4.0	<.1	4.6	160	.22	4320
16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
13...	9.0	4.2	1.1	122	100	16	4.0	<.1	2.2	140	.19	3400
JAN												
17...	9.1	3.4	1.2	122	100	21	5.0	<.1	1.7	150	.20	8510
FEB												
14...	9.6	4.5	1.4	121	99	--	--	--	--	--	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
14...	10	3.1	1.4	--	98	19	3.0	<.1	--	140	.19	6350
APR												
18...	--	--	--	122	100	--	--	--	--	--	--	--
MAY												
16...	--	--	--	--	96	--	--	--	--	--	--	--
JUN												
13...	7.1	3.8	1.8	98	80	21	4.0	<.1	--	130	.18	1760
JUL												
25...	--	--	--	93	76	--	--	--	--	--	--	--
AUG												
15...	--	--	--	93	76	--	--	--	--	--	--	--
SEP												
19...	7.8	3.2	1.4	105	86	7.0	6.0	<.1	--	10	.01	135

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
01...	2	.09	.07	.16	.02	--	--	--	--	--	--	--
15...	5	.70	.04	.12	.01	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
13...	6	.30	.03	.11	.01	200	<2	<100	<10	60	<1	<5
JAN												
17...	6	.27	<.01	.07	.01	--	--	--	--	--	--	--
FEB												
14...	1	1.1	.02	.07	.01	--	--	--	--	--	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
14...	3	.53	.04	.12	.01	200	--	<100	<10	--	3	--
APR												
18...	--	.42	.02	.09	.01	--	--	--	--	--	--	--
MAY												
16...	--	.61	.02	.12	.02	--	--	--	--	--	--	--
JUN												
13...	15	.64	.05	.06	.02	1200	--	<100	<10	--	1	--
JUL												
25...	--	.63	.02	.04	.02	--	--	--	--	--	--	--
AUG												
15...	--	.61	.02	.17	.02	--	--	--	--	--	--	--
SEP												
19...	17	.58	.04	.16	.03	<200	--	<100	<10	--	<1	--

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL THALLIUM (TL) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
01...	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	230	--	--	40	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
13...	<10	220	<10	<10	50	.4	<50	1	<10	<1000	<10	4.7
JAN												
17...	--	150	--	--	30	--	--	--	--	--	--	--
FEB												
14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
11...	--	--	--	--	--	--	--	--	--	--	--	--
14...	40	130	26	<10	60	<.2	<50	--	<10	<1000	20	2.6
APR												
18...	--	250	--	--	40	--	--	--	--	--	--	--
MAY												
16...	--	1000	--	--	10	--	--	--	--	--	--	--
JUN												
13...	<10	870	<10	<10	40	<.2	<50	--	<10	<1000	20	1.6
JUL												
25...	--	800	--	--	50	--	--	--	--	--	--	--
AUG												
15...	--	540	--	--	50	--	--	--	--	--	--	--
SEP												
19...	20	590	<10	<10	70	<1.0	<50	--	<10	<1000	20	4.1

03535915 CLINCH RIVER NEAR EATON CROSSROADS, TN

LOCATION.--Lat 35°53'15", long 84°19'28", Roane County, Hydrologic Unit 06010207, on right bank 100 ft (30 m) downstream from bridge on State Highway 95, 1.5 mi (2.4 km) downstream from Melton Hill Dam, and at mile 21.6 (34.8 km).

DRAINAGE AREA.--3,346 mi^2 (8,666 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1974 to current year.

INSTRUMENTATION.--Temperature recorder since October 1974.

REMARKS.--No record Apr. 5-11. Flow regulated by Norris Lake (station 03532500) and Melton Hill Lake (station 03535900).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.0°C Sept. 4, 1975; minimum, 2.0°C Jan. 19, 20, 1977.

EXTREMES FOR CURRENT YEAR:
WATER TEMPERATURES: Maximum, 22.0°C July 6; minimum, 2.0°C Jan. 19, 20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.0	19.0	14.5	13.0	13.5	10.5	9.5	10.0	7.0	5.5	6.0
2	19.5	18.0	19.0	14.0	13.0	13.5	10.5	9.5	10.0	7.0	5.0	6.0
3	20.0	18.5	19.0	14.0	13.0	13.5	10.5	9.5	10.0	6.5	6.0	6.0
4	20.0	18.5	19.0	14.0	12.0	13.0	10.0	9.0	9.5	6.5	6.0	6.0
5	20.0	18.5	19.0	14.0	12.0	13.0	10.0	9.0	9.5	6.5	6.0	6.0
6	20.0	19.0	19.5	13.5	11.5	13.0	10.0	9.5	10.0	6.5	6.0	6.0
7	20.0	18.5	19.0	13.5	12.0	13.0	10.0	9.5	10.0	6.0	5.5	5.5
8	20.0	18.5	19.0	13.5	11.0	12.0	10.0	8.5	9.5	6.5	5.0	5.5
9	20.0	18.5	19.0	14.0	11.0	13.0	10.0	8.5	9.0	6.5	6.0	6.5
10	19.5	18.0	18.5	13.5	11.5	12.0	9.5	8.5	9.0	6.5	4.5	6.0
11	19.5	18.0	19.0	13.0	11.5	12.0	9.5	9.0	9.5	7.0	4.5	5.5
12	19.5	18.0	19.0	13.0	11.5	12.0	9.5	9.0	9.5	7.0	5.0	6.0
13	19.5	18.0	19.0	12.0	11.0	11.5	9.5	8.5	9.0	7.0	4.5	5.5
14	19.5	18.0	19.0	12.0	11.0	11.5	10.0	8.5	9.5	6.5	6.0	6.0
15	19.5	18.0	19.0	11.5	11.0	11.5	10.0	9.0	9.5	6.5	5.5	6.0
16	19.0	18.0	18.5	12.0	10.5	11.5	9.5	9.0	9.0	8.0	4.0	5.5
17	18.5	17.0	18.0	11.5	11.0	11.5	10.0	8.0	9.0	10.5	3.5	7.0
18	19.0	16.5	17.0	11.5	11.0	11.5	9.5	8.5	9.0	6.0	3.0	4.5
19	18.5	16.0	17.0	11.5	11.0	11.0	9.5	8.5	9.0	8.0	2.0	5.0
20	18.0	16.0	16.5	11.5	10.5	11.0	10.0	8.5	9.0	4.0	2.0	3.5
21	17.0	15.5	16.0	11.0	10.0	10.5	10.0	8.0	8.5	5.5	3.0	4.0
22	16.5	15.0	15.5	11.0	10.0	10.5	10.0	8.0	9.0	4.5	3.5	4.0
23	16.0	15.0	15.5	11.5	10.0	10.5	9.5	8.0	9.0	4.0	3.5	3.5
24	16.0	15.0	15.5	11.0	10.5	11.0	9.0	7.0	8.5	4.0	3.5	3.5
25	15.5	15.0	15.5	10.5	10.0	10.5	9.0	7.0	8.5	4.5	3.5	4.0
26	16.0	14.5	15.0	11.0	10.5	10.5	8.5	7.0	8.0	5.0	3.5	4.0
27	15.5	14.0	15.0	11.0	10.5	11.0	9.0	7.0	8.0	5.0	4.0	4.5
28	15.0	13.5	14.0	11.0	10.5	11.0	8.5	7.0	8.0	4.5	3.5	4.0
29	15.0	13.0	14.0	10.5	9.5	10.0	9.0	6.5	8.0	6.5	3.5	5.5
30	14.5	14.0	14.5	11.0	9.5	10.0	8.5	6.0	7.0	6.0	3.5	5.0
31	14.0	13.5	13.5	---	---	---	9.0	5.5	6.5	5.0	3.0	4.0
MONTH	20.0	13.0	17.5	14.5	9.5	11.5	10.5	5.5	9.0	10.5	2.0	5.0

03535915 CLINCH RIVER NEAR EATON CROSSROADS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.5	3.5	4.5	7.0	6.0	6.5	13.5	11.5	13.0	14.0	13.5	13.5
2	5.0	3.5	4.5	8.0	6.0	7.0	14.0	13.5	13.5	14.0	13.5	13.5
3	5.5	4.5	5.0	8.5	7.0	8.0	13.5	13.0	13.0	14.0	13.5	14.0
4	5.5	4.0	4.5	9.0	8.0	8.5	14.5	13.5	14.0	14.5	14.0	14.0
5	5.0	4.0	4.5	8.5	6.5	7.0	---	---	---	14.0	14.0	14.0
6	5.5	3.5	4.5	8.0	7.0	8.0	---	---	---	14.5	13.5	14.0
7	5.0	3.0	4.0	9.0	7.0	8.5	---	---	---	14.5	14.0	14.0
8	5.5	3.0	4.0	9.0	8.0	8.5	---	---	---	14.5	14.0	14.0
9	5.0	3.5	4.0	9.5	8.0	9.0	---	---	---	16.5	14.0	15.5
10	5.5	3.5	4.5	10.0	8.5	9.5	---	---	---	16.0	15.5	16.0
11	5.5	4.0	4.5	10.0	9.0	9.5	---	---	---	16.0	15.0	15.5
12	5.5	5.0	5.0	10.0	9.0	9.5	11.5	11.0	11.0	16.0	15.0	15.5
13	5.5	4.5	5.0	9.5	9.0	9.0	11.0	10.5	11.0	16.0	15.5	15.5
14	5.5	4.0	4.5	10.5	9.0	10.0	11.0	11.0	11.0	15.5	15.0	15.5
15	5.5	4.0	4.5	11.0	10.0	10.5	11.5	11.0	11.0	16.0	15.0	15.5
16	5.5	4.0	4.5	11.5	10.5	11.0	11.5	11.0	11.0	16.0	15.5	15.5
17	6.0	3.5	4.5	12.0	10.5	11.5	11.5	11.0	11.5	16.0	15.0	15.5
18	6.5	5.0	6.0	12.0	11.5	11.5	11.0	11.0	11.0	16.0	15.5	15.5
19	7.0	5.5	6.0	12.0	11.5	11.5	11.0	10.5	11.0	16.5	15.5	15.5
20	6.5	5.0	6.0	13.0	11.5	12.0	11.0	11.0	11.0	16.5	15.5	16.0
21	6.5	5.5	6.0	13.0	11.5	12.0	11.5	11.0	11.0	16.5	16.0	16.0
22	6.5	5.5	6.0	12.0	11.0	11.5	11.5	11.0	11.0	16.5	16.0	16.0
23	6.5	6.0	6.0	13.0	11.0	12.0	11.5	11.0	11.0	17.0	16.0	16.5
24	6.5	6.0	6.0	13.0	11.0	12.0	12.0	11.0	11.5	18.0	16.5	17.0
25	6.5	6.0	6.0	14.0	11.5	13.0	13.0	10.5	12.0	18.5	17.0	18.0
26	8.0	6.5	7.0	13.5	12.0	13.0	12.0	10.5	11.5	18.5	16.5	17.0
27	8.0	7.0	8.0	14.0	13.0	13.5	12.0	11.5	11.5	19.0	17.0	18.0
28	8.0	6.0	7.0	14.0	13.5	13.5	11.5	11.5	12.0	18.0	17.0	17.0
29	---	---	---	14.5	13.5	14.0	13.0	11.5	13.0	18.0	16.5	17.0
30	---	---	---	15.0	14.0	14.5	13.5	13.0	13.0	16.5	16.0	16.5
31	---	---	---	16.5	12.0	14.5	---	---	---	16.5	16.0	16.5
MONTH	8.0	3.0	5.0	16.5	6.0	10.5				19.0	13.5	15.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.5	16.0	16.5	20.5	19.5	20.0	20.0	19.5	19.5	20.5	20.0	20.0
2	17.0	16.5	16.5	21.0	20.0	20.5	20.5	19.5	20.0	20.5	20.0	20.0
3	18.0	17.0	18.0	21.0	20.5	20.5	20.0	19.5	19.5	20.5	20.0	20.0
4	18.0	17.0	18.0	21.0	20.0	20.5	20.0	19.5	19.5	20.5	20.0	20.0
5	18.0	17.0	17.0	21.0	20.0	20.5	19.5	19.0	19.5	20.5	20.0	20.0
6	18.0	16.5	17.0	22.0	20.5	21.0	19.5	19.0	19.0	20.5	20.0	20.0
7	18.5	17.0	18.0	21.5	20.5	21.0	19.5	18.5	19.0	20.5	20.0	20.0
8	18.5	18.0	18.0	21.0	20.5	20.5	19.5	19.0	19.0	21.0	20.5	20.5
9	19.0	18.0	18.5	21.0	20.5	20.5	19.5	19.0	19.0	20.5	20.0	20.0
10	19.0	18.0	18.5	21.0	19.5	20.0	20.0	19.5	19.5	20.0	19.5	20.0
11	19.0	18.0	18.5	20.0	19.5	19.5	20.0	19.5	19.5	21.0	19.5	20.0
12	19.0	18.5	19.0	20.5	19.5	20.0	19.5	19.0	19.5	20.0	19.5	19.5
13	19.0	18.5	19.0	21.0	20.0	20.5	20.0	19.0	19.5	19.5	19.5	19.5
14	18.5	18.5	18.5	20.5	20.0	20.5	20.0	19.5	20.0	20.0	19.5	19.5
15	19.0	18.5	19.0	21.5	20.5	21.0	20.0	19.0	19.5	20.0	20.0	20.0
16	19.5	18.5	19.0	21.5	20.0	21.0	19.0	19.0	19.0	20.5	20.0	20.0
17	19.0	18.5	19.0	20.5	19.5	20.0	19.0	19.0	19.0	20.0	19.5	20.0
18	19.0	18.0	18.5	20.0	19.5	19.5	20.5	19.0	19.5	20.0	19.5	19.5
19	18.5	18.0	18.5	20.0	19.5	19.5	20.5	19.0	20.0	19.5	19.5	19.5
20	18.5	18.0	18.5	20.0	19.5	20.0	19.5	18.5	19.0	20.0	19.5	19.5
21	18.0	18.0	18.0	20.0	19.5	19.5	19.0	19.0	19.0	20.0	19.5	19.5
22	18.5	18.0	18.0	19.5	19.0	19.0	20.0	18.5	19.0	20.0	19.5	20.0
23	18.5	17.0	18.0	19.5	19.0	19.5	19.0	18.5	19.0	19.5	19.5	19.5
24	19.0	18.0	18.5	19.5	18.5	19.0	20.0	19.0	19.5	19.5	19.5	19.5
25	19.0	18.0	18.5	19.0	18.5	18.5	21.0	19.5	20.0	19.5	19.5	19.5
26	19.0	18.5	18.5	20.0	18.5	19.0	20.5	20.0	20.0	19.5	19.0	19.5
27	19.5	18.5	18.5	20.0	19.0	19.5	20.0	20.0	20.0	20.0	19.0	19.5
28	19.0	18.5	18.5	20.0	19.0	19.5	20.5	20.0	20.0	20.0	19.5	19.5
29	19.5	18.5	19.0	20.0	19.5	20.0	20.0	20.0	20.0	19.5	19.0	19.0
30	20.0	19.0	19.5	20.0	19.5	19.5	20.0	20.0	20.0	19.0	19.0	19.0
31	---	---	---	20.0	19.5	19.5	20.5	20.0	20.0	---	---	---
MONTH	20.0	16.0	18.5	22.0	18.5	20.0	21.0	18.5	19.5	21.0	19.0	19.5
YEAR	22.0	2.0	13.5									

03538225 POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°59'55", long 84°20'23", Roane County, Hydrologic Unit 06010207, on right bank, 1,000 ft (300 m) upstream from county road bridge, 0.4 mi (0.6 km) downstream from Indian Creek, 8.2 mi (13.2 km) southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 13.8 (22.2 km).

DRAINAGE AREA.--82.5 mi^2 (213.7 km^2).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 743.50 ft (226.619 m) above mean sea level.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--17 years, 176 ft^3/s (4.984 m^3/s), 28.97 in/yr (736 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s (323 m^3/s) Apr. 5, 1977, from rating curve extended above 8,000 ft^3/s (227 m^3/s), gage height, 27.93 ft (8.51 m) from floodmarks; minimum, 5.0 ft^3/s (0.14 m^3/s), Oct. 27, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1928, at site about 5.0 mi (8.0 km) upstream, drainage area, 55.9 mi^2 (144.8 km^2), discharge, about 14,000 ft^3/s (396 m^3/s) was the greatest known since at least 1900, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	1130	3700	105	18.04	5.499	Apr. 5	Unknown	*11400	323	a27.93	8.513
Mar. 31	0700	2170	61.6	14.72	4.487						

a From floodmarks.

Minimum discharge, 6.5 ft^3/s (0.18 m^3/s) Sept. 3, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	148	120	157	62	248	539	134	27	111	11	6.9
2	14	108	98	147	58	189	367	111	21	394	9.7	6.8
3	11	86	80	136	54	155	785	119	20	115	12	6.6
4	10	72	67	123	53	308	5300	139	18	71	10	6.6
5	9.9	60	57	131	68	352	3000	117	17	50	9.0	6.6
6	11	51	85	126	52	281	1700	99	16	40	8.4	13
7	23	46	783	194	50	222	900	89	24	33	9.9	51
8	20	40	447	184	48	177	500	80	20	28	8.4	83
9	73	37	242	192	46	147	308	67	17	24	12	25
10	44	36	176	309	39	133	255	57	16	23	13	15
11	21	34	145	254	41	122	219	52	15	21	9.3	11
12	15	37	301	215	70	385	189	46	15	19	8.6	9.3
13	13	34	295	167	122	3130	167	42	15	31	8.8	17
14	12	30	224	201	101	839	149	39	45	21	24	88
15	11	32	202	222	92	393	138	37	31	17	31	195
16	11	31	166	196	78	298	127	34	25	15	23	280
17	12	28	135	163	67	240	116	31	26	14	29	286
18	12	27	117	160	69	224	106	30	21	13	57	125
19	11	26	101	150	67	194	100	43	96	17	21	112
20	20	25	155	120	64	230	95	36	63	18	13	123
21	23	24	157	100	57	186	87	31	90	12	11	60
22	17	22	122	90	53	202	86	30	37	15	9.1	42
23	15	21	120	80	54	181	154	40	51	18	8.4	33
24	19	21	104	75	235	168	283	73	41	15	11	29
25	778	21	98	65	218	154	152	42	66	78	25	27
26	771	21	140	65	173	142	120	35	292	119	11	445
27	170	46	136	105	328	132	102	30	342	27	9.0	498
28	104	90	134	90	338	133	89	28	115	17	10	369
29	76	286	127	80	---	150	100	29	75	14	9.9	186
30	92	172	109	70	---	839	88	25	62	15	7.7	114
31	237	---	204	64	---	1720	---	23	---	13	7.2	---
TOTAL	2672.9	1712	5447	4431	2757	12274	16321	1788	1719	1418	447.4	3269.8
MEAN	86.2	57.1	176	143	98.5	396	544	57.7	57.3	45.7	14.4	109
MAX	778	286	783	309	338	3130	5300	139	342	394	57	498
MIN	9.9	21	57	64	39	122	86	23	15	12	7.2	6.6
CFSM	1.05	.69	2.13	1.73	1.19	4.80	6.59	.70	.70	.55	.18	1.32
IN.	1.21	.77	2.46	2.00	1.24	5.53	7.36	.81	.78	.64	.20	1.47

CAL YR 1976 TOTAL 49293.2 MEAN 135 MAX 2020 MIN 7.3 CFSM 1.64 IN 22.23
WTR YR 1977 TOTAL 54257.1 MEAN 149 MAX 5300 MIN 6.6 CFSM 1.81 IN 24.46

03538250 EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°57'58", long 84°21'30", Roane County, Hydrologic Unit 06010207, near left bank, on upstream side of county road bridge, 0.3 mi (0.5 km) north of State Highway 95, 1.7 mi (2.7 km) upstream from Bear Creek, 5.8 mi (9.3 km) southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 3.3 (5.3 km).

DRAINAGE AREA.--19.5 mi^2 (50.5 km^2).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.16 ft (229.868 m) above mean sea level.

REMARKS.--Records good. Flow includes effect of operations of the Department of Energy's Y-12 Plant, which may add up to 20 ft^3/s (0.57 m^3/s), and the west end sewage treatment plant of the City of Oak Ridge, which may add up to 10 ft^3/s (0.28 m^3/s). Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--17 years, 52.0 ft^3/s (1.473 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft^3/s (116 m^3/s) Nov. 28, 1973, on basis of runoff comparisons with nearby stations; gage height, 16.0 ft (4.88 m) from floodmarks, backwater from low steel on bridge; minimum daily, 15 ft^3/s (0.42 m^3/s) July 6, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1944, the greatest known since 1900, reached a discharge of about 4,600 ft^3/s (130 m^3/s) at site 5.1 mi (8.2 km) upstream, from report of the Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0330	1340	37.9	9.24	2.816	Apr. 4	Unknown	*a4000	113	b16.0	4.88

a On basis of runoff comparison with nearby stations.
b From floodmarks.

Minimum daily, 17 ft^3/s (0.48 m^3/s) June 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	38	41	46	26	56	72	31	20	37	21	20
2	20	33	37	40	26	46	67	31	18	97	22	19
3	18	29	31	39	24	41	244	43	18	33	21	19
4	18	27	29	38	25	86	1720	35	17	28	20	19
5	18	26	26	45	26	66	796	25	17	26	19	19
6	21	24	44	42	24	63	194	24	19	25	19	20
7	33	23	224	69	23	53	117	27	20	26	20	25
8	21	22	90	51	23	47	89	22	18	27	21	30
9	60	23	61	54	23	42	70	21	18	23	33	24
10	25	23	51	92	23	39	60	21	18	22	30	22
11	21	22	49	60	22	37	53	21	18	22	22	20
12	20	27	133	53	37	216	49	20	19	22	20	20
13	19	23	85	47	34	539	45	20	21	22	25	31
14	18	21	63	64	28	125	40	19	58	23	35	58
15	18	22	65	57	27	89	38	18	28	24	50	74
16	18	22	55	49	25	72	37	20	22	24	45	104
17	19	22	47	43	24	62	35	18	21	21	50	199
18	18	21	42	43	24	61	30	25	21	19	60	73
19	18	23	37	42	24	52	30	21	58	20	50	98
20	31	22	69	37	23	71	29	18	72	21	45	63
21	20	21	57	35	23	53	28	18	75	21	40	43
22	18	21	46	31	23	59	29	22	30	48	35	35
23	18	22	43	29	23	49	38	25	38	28	30	32
24	23	21	38	31	85	46	32	25	38	21	35	29
25	292	21	37	31	52	44	27	21	74	57	40	27
26	143	21	54	31	43	43	25	26	153	34	30	148
27	55	42	43	44	111	41	24	19	241	24	25	141
28	42	69	41	37	72	44	22	19	57	22	26	80
29	34	116	37	31	---	48	21	18	41	29	23	52
30	46	55	34	29	---	158	22	18	37	25	20	42
31	62	---	71	27	---	97	---	18	---	21	19	---
TOTAL	1210	902	1780	1367	943	2545	4083	709	1305	892	951	1586
MEAN	39.0	30.1	57.4	44.1	33.7	82.1	136	22.9	43.5	28.8	30.7	52.9
MAX	292	116	224	92	111	539	1720	43	241	97	60	199
MIN	18	21	26	27	22	37	21	18	17	19	19	19

CAL YR 1976 TOTAL 15800 MEAN 43.2 MAX 517 MIN 15
WTR YR 1977 TOTAL 18273 MEAN 50.1 MAX 1720 MIN 17

03539800 OBED RIVER NEAR LANCING, TN

LOCATION.--Lat 36°04'53", long 84°40'15", Morgan County, Hydrologic Unit 06010208, on left bank at Alley Ford, 2.9 mi (4.7 km) southwest of Lancing, 3.0 mi (4.8 km) downstream from Clear Creek, and at mile 1.5 (2.4 km).

DRAINAGE AREA.--518 mi^2 (1,342 km^2).

PERIOD OF RECORD.--October 1956 to September 1968, March 1973 to current year. Prior to May 1957, monthly discharge only, published in WSP 1726.

GAGE.--Water-stage recorder. Datum of gage is 891.91 ft (271.854 m) above mean sea level.

REMARKS.--Records good, except periods of no gage-height record, which are fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--16 years (water years 1957-68, 1974-77), 1,063 ft^3/s (30.10 m^3/s), 27.87 in/yr (708 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft^3/s (2,970 m^3/s) May 27, 1973, gage height, 29.51 ft (8.995 m), dross line in gage well, 30.5 ft (9.30 m), from floodmarks, from rating curve extended above 33,000 ft^3/s (935 m^3/s) on basis of slope conveyance study at gage height 22.40 ft (6.828 m), and slope-area measurement of peak flow; minimum, 0.4 ft^3/s (0.011 m^3/s) Oct. 31, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 33.9 ft (10.33 m), 35 ft (11 m) downstream from gage, from high water marks by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 60,600 ft^3/s (1,720 m^3/s), time unknown, Apr. 4, gage height, 23.5 ft (7.16 m), from floodmark, no other peak above base of 13,000 ft^3/s (368 m^3/s); minimum recorded, 7.5 ft^3/s (0.21 m^3/s) Aug. 10, but may have been lower during period of missing record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	1460	720	720	410	1800	1370	1190	142	138	16	17
2	67	908	609	700	390	1420	1140	898	109	109	13	15
3	61	636	557	800	380	1170	3320	862	93	97	12	13
4	52	489	478	780	370	1820	45000	1140	84	103	11	13
5	45	389	410	760	400	3000	15000	894	80	100	10	11
6	39	319	384	971	460	2200	5000	717	80	95	18	16
7	36	271	1630	1450	380	1690	2000	616	78	75	16	15
8	32	236	2430	1390	360	1340	1200	840	75	50	13	16
9	38	208	1660	1310	350	1070	900	752	69	44	11	39
10	49	197	1270	2990	340	887	700	563	69	38	30	71
11	79	184	1050	2500	330	756	620	447	68	34	77	61
12	85	177	1420	2000	400	1710	550	368	66	34	63	46
13	71	169	2050	1700	807	13100	500	307	64	34	45	35
14	59	169	1640	1620	798	5010	450	259	64	32	44	30
15	48	179	1410	2110	703	2940	400	222	60	30	53	29
16	42	189	1340	1920	619	2070	370	193	60	25	212	47
17	38	195	1120	1500	527	1530	340	167	68	22	214	750
18	33	175	903	1300	511	1280	320	146	78	20	288	1020
19	30	159	695	1100	481	1090	300	148	69	16	390	528
20	29	150	639	900	508	1210	275	352	80	15	228	300
21	30	143	729	800	462	1270	271	268	106	14	137	205
22	29	135	647	700	428	1140	266	198	172	15	94	162
23	34	125	555	650	424	1000	4170	187	168	16	70	135
24	59	115	522	620	2200	850	8790	187	152	20	56	98
25	638	108	492	580	2930	730	4480	240	253	32	46	80
26	3700	108	789	550	1970	627	2730	187	469	36	39	72
27	1650	142	980	550	1950	529	1900	162	780	52	35	902
28	777	337	894	480	2320	465	1380	145	456	44	30	2290
29	499	788	784	460	---	460	1050	126	272	30	26	2270
30	421	981	651	460	---	1010	864	123	187	24	23	1080
31	1630	---	761	450	---	1830	---	135	---	20	20	---
TOTAL	10467	9841	30219	34821	22208	57004	105656	13039	4571	1414	2340	10366
MEAN	338	328	975	1123	793	1839	3522	421	152	45.6	75.5	346
MAX	3700	1460	2430	2990	2930	13100	45000	1190	780	138	390	2290
MIN	29	108	384	450	330	460	266	123	60	14	10	11
CFSM	.65	.63	1.88	2.17	1.53	3.55	6.80	.81	.29	.09	.15	.67
IN.	.75	.71	2.17	2.50	1.59	4.09	7.59	.94	.33	.10	.17	.74

CAL YR 1976 TOTAL 295943 MEAN 809 MAX 14700 MIN 11 CFSM 1.56 IN 21.25
WTR YR 1977 TOTAL 301946 MEAN 827 MAX 45000 MIN 10 CFSM 1.60 IN 21.68

NOTE.--No gage-height record July 6 to Aug. 10.

03540500 EMORY RIVER AT OAKDALE, TN

LOCATION.--Lat 35°58'59", long 84°33'29", Morgan County, Hydrologic Unit 06010208, on left bank, at Oakdale, 1,000 f (300 m) downstream from highway bridge, 1,100 ft (340 m) downstream from Mud Lick Creek, and at mile 18.3 (29.4 km).

DRAINAGE AREA.--764 mi^2 (1,979 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1927 to current year. Prior to October 1929, published as Emery River at Harriman and October 1929 to September 1934 as Emery River at Oakdale.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1940. WSP 1386: 1928-30(M), 1932, 1943, 1945(P).

GAGE.--Water-stage recorder. Datum of gage is 761.38 ft (232.069 m) above mean sea level. Prior to Oct. 1, 1929, nonrecording gage at site 5.8 mi (9.3 km) downstream at datum 43.60 ft (13.289 m) lower, and Oct. 1, 1929, to Dec. 29, 1969, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Water-discharge record good.

AVERAGE DISCHARGE.--50 years, 1,458 ft^3/s (41.29 m^3/s), 25.91 in/yr (658 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft^3/s (5,520 m^3/s) Mar. 23, 1929, gage height, 41.2 ft (12.56 m), present site and datum, and 61.1 ft (18.62 m), site and datum then in use, from floodmarks and flood profile, from rating curve extended above 85,000 ft^3/s (2,410 m^3/s), confirmed by slope-area measurement of May 28, 1973 flood at gage height 38.68 ft (11.790 m); no flow at times in 1944, 1952-53.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1857, that of Mar. 23, 1929, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 19,000 ft^3/s (538 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0430	27600	782	19.16	5.840	Apr. 4	2200	*107000	3030	a34.05	10.378

a From floodmark.

Minimum discharge, 12 ft^3/s (0.34 m^3/s) Aug. 5, 6, 9, gage height, 1.45 ft (0.442 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	2030	1190	1090	478	2530	2570	1900	197	201	30	32
2	140	1350	1010	1000	433	2020	1940	1410	163	366	24	28
3	127	1010	908	1130	421	1660	6030	1260	126	230	19	37
4	107	804	806	1070	420	2360	60400	1490	100	192	16	34
5	88	641	706	1020	484	4050	40500	1270	82	157	13	26
6	76	551	669	1320	499	3060	9660	1060	67	123	25	35
7	76	473	2930	1800	482	2360	4930	894	59	99	27	50
8	69	414	3780	1840	405	1870	3270	1000	51	79	16	146
9	99	367	2440	1730	394	1540	2400	976	44	65	25	181
10	165	337	1810	3610	390	1320	1870	767	38	52	26	153
11	163	323	1500	3360	391	1170	1530	632	34	47	61	114
12	175	312	2010	2300	503	2870	1270	535	33	43	123	87
13	157	295	3000	1840	1230	17600	1090	450	32	49	90	72
14	131	286	2380	1710	1370	6890	944	382	43	43	243	107
15	106	286	2010	2540	1260	3940	824	330	55	40	732	405
16	90	294	1890	2480	1110	2760	730	286	51	35	752	1930
17	79	305	1600	1680	896	2050	640	247	83	36	715	2220
18	67	300	1360	1580	927	1730	565	215	99	30	768	1230
19	58	275	1120	1370	845	1500	520	205	102	23	497	763
20	57	261	1030	1130	853	1560	481	358	190	18	306	546
21	61	250	1090	1000	787	1670	443	373	267	17	218	397
22	73	239	995	901	732	1550	415	296	302	26	165	318
23	72	224	911	776	716	1410	4150	268	249	48	131	243
24	79	207	845	763	3350	1250	11600	316	315	27	127	191
25	1540	195	784	717	4360	1120	5640	340	519	48	139	161
26	5470	189	1120	659	2890	1000	3330	292	1260	133	114	2120
27	2230	242	1400	658	2760	880	2290	237	850	82	88	3910
28	1180	495	1330	672	3170	783	1690	211	528	73	67	3640
29	809	1180	1230	601	---	779	1350	202	353	54	54	1760
30	692	1500	1040	578	---	1920	1170	177	258	42	44	1130
31	2090	---	1100	584	---	4570	---	164	---	35	37	---
TOTAL	16430	15635	45994	43509	32556	81772	174242	18543	6550	2513	5692	22066
MEAN	530	521	1484	1404	1163	2638	5808	598	218	81.1	184	736
MAX	5470	2030	3780	3610	4360	17600	60400	1900	1260	366	768	3910
MIN	57	189	669	578	390	779	415	164	32	17	13	26
CFSM	.69	.68	1.94	1.84	1.52	3.45	7.60	.78	.29	.11	.24	.96
IN.	.80	.76	2.24	2.12	1.59	3.98	8.48	.90	.32	.12	.28	1.07

CAL YR 1976 TOTAL 440070 MEAN 1202 MAX 22500 MIN 11 CFSM 1.57 IN 21.43
WTR YR 1977 TOTAL 465502 MEAN 1275 MAX 60400 MIN 13 CFSM 1.67 IN 22.67

03540500 EMORY RIVER AT OAKDALE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-67, 1974 to current year.

COOPERATION.--Samples collected and analyzed by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
13...	1045	141	--	--	15.5	--	--	--	--	1.1	--
18...	1020	54	110	7.2	13.0	8	1	9.4	8	--	--
NOV											
08...	1230	434	62	6.9	6.0	5	1	12.6	2	--	--
29...	1200	1230	75	--	4.0	--	--	--	--	--	--
DEC											
13...	1200	3080	49	6.4	8.0	3	3	11.9	3	--	--
FEB											
09...	1130	409	58	6.2	.8	5	2	14.6	2	<1.0	<10
14...	1230	1480	56	--	2.0	--	--	--	--	--	--
MAR											
16...	1145	2750	41	6.4	11.0	5	6	10.9	--	<1.0	760
29...	1240	758	75	--	13.5	--	--	--	--	--	--
APR											
13...	1100	1090	50	6.4	16.0	5	2	9.9	--	<1.0	960
20...	1400	467	60	--	19.0	--	--	--	--	--	--
MAY											
04...	1215	1550	47	6.6	17.5	4	2	10.0	8	<1.0	620
JUN											
15...	1330	54	96	7.4	26.8	5	1	7.4	--	1.1	1000
28...	1100	555	85	--	25.5	--	--	--	--	--	--
JUL											
06...	1200	122	85	7.0	28.5	10	4	8.0	--	2.6	>2000
AUG											
03...	1030	20	120	6.9	27.0	5	4	7.5	7	<1.0	<100

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
13...	<10	--	--	--	--	--	--	--	--	--
18...	--	11	3.3	3.8	1.6	23	19	30	5.0	<.1
NOV										
08...	--	6.0	2.1	1.7	.9	12	10	14	10	<.1
29...	--	--	--	--	--	--	--	--	--	--
DEC										
13...	--	12	2.5	--	--	13	11	10	5.0	<.1
FEB										
09...	<10	5.0	1.7	2.7	.7	9	7	12	4.0	<.1
14...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	<10	--	--	--	--	7	6	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
13...	10	--	--	--	--	10	8	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	80	4.0	1.4	3.7	.6	12	10	11	3.0	<.1
JUN										
15...	200	--	--	--	--	24	20	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	80	--	--	--	--	18	15	--	--	--
AUG										
03...	<100	13	3.8	2.6	1.6	20	16	23	4.0	<.1

03540500 EMORY RIVER AT OAKDALE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
13...	--	--	--	--	--	--	--	--	--	--
18...	1.6	50	.07	7.29	1	<.01	.01	.11	<.01	<.01
NOV										
08...	3.9	40	.05	46.9	1	.19	<.01	.08	.03	.01
29...	--	--	--	--	--	--	--	--	--	--
DEC										
13...	3.4	40	.05	333	6	.18	.06	.03	.02	.01
FEB										
09...	3.1	40	.05	44.2	1	.25	.01	.09	.02	--
14...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	--	--	--	--	--	.22	.01	.05	.01	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
13...	--	--	--	--	--	.16	.01	.04	.01	--
20...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	--	20	.03	83.7	2	.04	.01	.03	.03	--
JUN										
15...	--	--	--	--	--	.10	.03	.13	.02	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	--	--	--	--	--	.06	.01	.10	.01	--
AUG										
03...	--	80	.11	4.32	7	.09	.13	.13	.02	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CO) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
13...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	390	80
NOV										
08...	200	<2	<100	<10	70	<1	<5	40	160	<50
29...	--	--	--	--	--	--	--	--	--	--
DEC										
13...	--	--	--	--	--	--	--	--	320	90
FEB										
09...	<200	<2	<100	<10	<10	<1	<5	30	230	<50
14...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	--	--	--	--	--	--	--	--	420	<50
29...	--	--	--	--	--	--	--	--	--	--
APR										
13...	--	--	--	--	--	--	--	--	120	<50
20...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	1900	--	<100	<10	--	1	--	20	150	<50
JUN										
15...	--	--	--	--	--	--	--	--	<50	280
28...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	--	--	--	--	--	--	--	--	380	90
AUG										
03...	<200	--	<100	<10	--	<1	--	40	150	150

03540500 EMORY RIVER AT OAKDALE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
13...	--	--	--	--	--	--	--	--	--	--
18...	--	--	80	30	--	--	--	--	--	--
NOV										
08...	<10	<10	90	60	<.2	<50	1	<10	30	1.4
29...	--	--	--	--	--	--	--	--	--	--
DEC										
13...	--	--	--	50	--	--	--	--	--	--
FEB										
09...	<10	<10	80	70	.9	<50	2	<10	<10	1.3
14...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	--	--	60	50	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
APR										
13...	--	--	70	60	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	<10	<10	60	50	<.2	<50	--	<10	90	1.5
JUN										
15...	--	--	40	<10	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
JUL										
06...	--	--	50	<10	--	--	--	--	--	--
AUG										
03...	<10	<10	920	50	<.2	<50	--	<10	70	.8

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06020001, on right bank in powerhouse at Watts Bar Dam, 6.5 mi (10.4 km) southeast of Spring City, and at mile 529.9 (852.6 km).

DRAINAGE AREA.--17,310 mi^2 (44,830 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1934 to February 1940 (published as "at Breedenton"), October 1974 to current year. Equivalent record for period January 1942 to December 1974 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is at mean sea level. Prior to March 1940 at site 6.7 mi (10.8 km) downstream at datum 666.22 ft (203.064 m) higher.

REMARKS.--Flow regulated since 1936 by many reservoirs above station (see p. 390 and Water Resources Data for North Carolina, 1977).

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--8 years (water years 1934-39, 1974-77), 28,830 ft^3/s (816.5 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 202,000 ft^3/s (5,720 m^3/s) Mar. 28, 1936; minimum daily, 4,200 ft^3/s (119 m^3/s) Jan. 29, 30, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 161,000 ft^3/s (4,560 m^3/s) Apr. 5; minimum daily, 10,200 ft^3/s (289 m^3/s) Feb. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15900	32800	30200	35800	32600	16900	32400	28700	34400	25400	24600	27200
2	16400	32100	31600	30500	24300	17200	37900	28000	29300	26400	21100	21400
3	15200	31700	34600	36600	20200	16000	38000	29300	30000	24400	20500	17600
4	19300	32100	29200	38600	12800	14500	69300	26000	25400	18400	15500	14600
5	18700	31900	24300	34300	17700	12300	161000	25200	19000	15600	15300	16200
6	19100	27200	29000	37800	17700	12300	103000	26600	25700	20700	30500	22900
7	18900	20600	30600	36500	23200	14500	82600	23400	29200	33100	24800	26000
8	17800	28800	40500	38600	29800	13900	68900	20700	28400	30300	20900	24000
9	23300	25500	41900	34800	28100	14100	64900	27900	27700	27700	18800	24900
10	27300	24300	39900	45100	18200	18600	60600	28200	27100	25800	16500	26200
11	30100	27300	36200	46200	19800	22400	52200	26900	19300	21400	19800	12900
12	24700	27400	35900	45600	18700	18300	43400	26100	13100	25500	24200	19200
13	24400	27700	41500	46100	18500	28700	43300	28600	23100	26300	31200	18400
14	26300	23000	41900	33200	19700	37000	43500	20400	29500	27900	20100	25800
15	27600	25200	40300	29800	31100	37300	39700	16000	31400	28100	22700	32400
16	28300	24200	38100	29900	24500	37100	38200	28600	29900	34900	23700	24500
17	20000	26900	38700	36700	25400	26700	38300	28500	28900	25500	24800	13500
18	27800	24900	35800	37600	21000	27700	38300	27200	32500	23400	26900	21600
19	27500	25800	39600	39800	16100	25400	38500	31100	27700	25200	27700	23800
20	29100	18900	38600	37900	10200	22900	33200	32000	23400	27000	24900	28900
21	27200	16700	36600	34400	13500	21500	36100	25800	24700	25900	13100	24600
22	29000	24700	40600	35200	20000	26700	37600	14200	24800	22500	21200	28100
23	26400	32100	35000	22200	13200	36500	37700	20900	27500	29000	19400	23800
24	24200	28700	33500	26800	12700	35400	28200	25100	34000	24700	20200	19700
25	28400	16300	34800	33700	16700	29300	21000	28500	30400	23900	19400	10800
26	35800	16400	26600	34600	18100	27000	32900	34200	30500	24400	26800	25500
27	28400	16600	23300	25400	19900	18100	33500	27600	37200	26300	32600	31100
28	31900	16300	25800	30300	19900	20700	36100	26900	26300	23200	29800	31600
29	29100	28000	30200	34600	---	16400	38600	13800	22600	20300	24300	23000
30	35600	29300	29800	26700	---	15700	29500	20500	24300	28500	21700	21800
31	32100	---	27200	17300	---	20000	---	29200	---	28400	22800	---
TOTAL	785800	763400	1061800	1072600	563600	701100	1458400	796100	817300	790100	705800	682000
MEAN	25350	25450	34250	34600	20130	22620	48610	25680	27240	25490	22770	22730
MAX	35800	32800	41900	46200	32600	37300	161000	34200	37200	34900	32600	32400
MIN	15200	16300	23300	17300	10200	12300	21000	13800	13100	15600	13100	10800

CAL YR 1976 TOTAL 9244310 MEAN 25260 MAX 45400 MIN 6440
WTR YR 1977 TOTAL 10198000 MEAN 27940 MAX 161000 MIN 10200

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1976 to current year.
WATER TEMPERATURES: February 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since February 1976.

REMARKS.--No daily record Apr. 5-28 (tape torn due to excessive moisture), Sept. 11-28 (tape jammed). Flow regulated by many reservoirs above station (see p. 390 and Water Resources Data for North Carolina, 1977).

COOPERATION.--Samples collected and analyzed by Tennessee Valley Authority as noted.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 238 micromhos June 12, 1977; minimum, 120 micromhos June 19, 20, 1976.
WATER TEMPERATURES: Maximum, 28.5°C July 26, Aug. 31 and several days in September 1977; minimum, 2.0°C Jan. 23, 29, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 238 micromhos June 12; minimum, 125 micromhos May 8.
WATER TEMPERATURES: Maximum, 28.5°C July 26, Aug. 31, and several days in September; minimum, 2.0°C Jan. 23, 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
OCT												
18...	0800	33800	140	6.3	19.0	6	1	7.4	4	--	--	--
NOV												
04...	1058	39500	180	7.4	13.2	6	2	9.1	5	1.0	--	--
04...	1104	39500	180	7.4	13.3	6	2	9.0	8	<1.0	--	--
04...	1200	39400	160	7.4	14.0	--	4	--	--	--	--	--
24...	1115	43000	160	7.3	10.0	--	6	--	--	--	--	--
DEC												
09...	1130	38100	160	7.7	8.0	--	5	--	--	--	--	--
13...	0800	43300	180	7.6	8.0	5	2	8.1	4	--	--	--
JAN												
11...	1200	45300	165	7.5	4.0	--	6	--	--	--	--	--
17...	1100	45800	170	7.1	2.5	5	11	10.0	2	--	--	--
FEB												
09...	1250	22100	180	7.8	2.5	14	5	13.0	8	2.1	--	--
09...	1300	22100	180	7.8	2.5	15	4	13.0	7	1.4	--	--
23...	1200	13800	190	7.6	5.0	--	5	--	--	--	--	--
MAR												
23...	1245	37500	150	8.1	12.0	--	6	--	--	--	--	--
31...	1050	3500	150	--	13.5	9	2	9.6	3	--	--	--
APR												
18...	0800	36300	320	8.9	16.0	23	24	8.0	7	--	--	--
20...	1145	35000	125	7.4	16.5	--	30	--	--	--	--	--
MAY												
03...	1910	35500	140	6.8	17.5	6	5	8.6	3	1.2	2800	<100
03...	1915	35500	140	6.3	17.5	11	4	8.8	2	1.1	12400	<100
25...	1245	33300	150	7.3	20.0	--	5	--	--	--	--	--
JUN												
13...	0800	16000	160	7.5	22.0	7	8	4.8	1	--	--	--
29...	1100	34700	160	7.4	24.0	--	1	--	--	--	--	--
JUL												
27...	1050	43100	170	7.5	26.5	--	4	--	--	--	--	--
AUG												
02...	1020	20000	175	7.7	27.0	--	9	--	--	--	--	--
02...	1123	20600	160	7.5	26.0	5	3	5.3	7	1.5	--	--
02...	1132	20600	160	7.5	26.2	5	2	5.3	8	1.6	--	--
SEP												
29...	1030	47000	160	7.4	25.0	--	5	--	--	--	--	--

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	FECAL COLI-FORM .7UM-MF (COL./ 100 ML)	FECAL STREP-TOCOCCI KF AGAR (COL. PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	TOTAL CAL-CIUM (CA) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
18...	--	--	51	47	14	--	4.0	--	6.3	--	--	--
NOV												
04...	--	--	75	25	21	--	5.4	--	6.8	--	--	--
04...	--	--	71	21	21	--	4.6	--	6.8	--	--	--
04...	<1	B1	70	13	--	20	--	4.8	--	7.2	18	.4
24...	--	--	63	9	--	18	--	4.3	--	6.9	19	.4
DEC												
09...	27	12	71	14	--	21	--	4.6	--	8.5	20	.4
13...	--	--	71	11	20	--	5.2	--	10	--	--	--
JAN												
11...	25	8	72	14	--	21	--	4.8	--	6.1	15	.3
17...	--	--	--	--	--	--	--	--	6.3	--	--	--
FEB												
09...	--	--	--	--	23	--	5.6	--	5.9	--	--	--
09...	--	--	--	--	23	--	5.5	--	6.0	--	--	--
23...	<1	<1	85	20	--	24	--	6.0	--	7.0	15	.3
MAR												
23...	B3	<1	68	8	--	20	--	4.4	--	5.5	15	.3
31...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	--	--	--	--	--	--	--	--	--	--	--	--
20...	B4	<1	59	6	--	17	--	3.9	--	2.6	9	.1
MAY												
03...	--	--	--	--	18	--	4.5	--	3.7	--	--	--
03...	--	--	--	--	20	--	4.6	--	3.7	--	--	--
25...	<1	B4	73	22	--	21	--	5.1	--	4.6	12	.2
JUN												
13...	--	--	--	--	--	--	--	--	--	--	--	--
29...	B11	B6	68	14	--	20	--	4.5	--	5.1	14	.3
JUL												
27...	B3	B8	69	12	--	20	--	4.6	--	5.6	15	.3
AUG												
02...	--	--	71	17	--	21	--	4.6	--	5.6	14	.3
02...	--	--	--	--	21	--	4.1	--	5.0	--	--	--
SEP												
29...	--	--	65	14	--	19	--	4.3	--	6.8	18	.4

B--Results based on colony count outside the acceptable range (non-ideal colony count).

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL POTASSIUM (K) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT												
18...	1.2	--	5	0	4	4.0	14	8.0	<.1	--	5.2	70
NOV												
04...	1.2	--	61	0	50	3.9	20	9.0	<.1	--	4.8	90
04...	1.3	--	61	0	50	3.9	20	9.0	<.1	--	4.7	100
04...	--	1.6	69	--	57	4.4	14	8.1	--	.2	4.8	97
24...	--	1.6	65	0	53	5.2	14	8.5	--	.1	5.2	95
DEC												
09...	--	1.8	70	0	57	2.2	17	10	--	.2	4.7	107
13...	1.2	--	73	0	60	2.9	15	12	<.1	--	4.5	140
JAN												
11...	--	1.6	71	0	58	3.6	16	7.0	--	.1	5.3	92
17...	1.2	--	67	0	55	8.5	16	8.0	<.1	--	4.4	80
FEB												
09...	1.3	--	72	0	59	1.8	15	8.0	--	--	4.0	100
09...	1.3	--	71	0	58	1.8	14	8.0	--	--	4.0	100
23...	--	1.4	79	0	65	3.2	16	7.2	--	.1	3.1	119
MAR												
23...	--	1.5	73	0	60	.9	13	5.8	--	.0	2.2	100
31...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	--	--	85	6	80	.2	--	--	--	--	--	--
20...	--	1.6	64	0	52	4.1	8.5	3.0	--	.0	5.1	83
MAY												
03...	1.2	--	56	0	46	14	12	5.0	<.1	--	4.4	80
03...	1.0	--	--	--	47	--	13	5.0	<.1	--	4.0	80
25...	--	1.5	63	0	52	5.1	11	5.1	--	.1	4.5	92
JUN												
13...	--	--	71	0	58	3.6	--	--	--	--	--	--
29...	--	1.6	67	0	55	4.3	12	6.0	--	.1	5.1	100
JUL												
27...	--	1.6	69	0	57	3.5	7.9	6.7	--	.1	4.8	115
AUG												
02...	--	1.5	66	0	54	2.1	13	6.5	--	.1	4.9	108
02...	1.4	--	66	0	54	3.3	14	7.0	<.1	--	4.6	110
02...	1.5	--	67	0	55	3.4	14	7.0	<.1	--	4.6	110
SEP												
29...	--	1.8	62	0	51	3.9	14	8.3	--	.1	5.2	84

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	DIS-SOLVED KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT												
18...	--	.10	6390	5	.20	.05	.08	--	--	--	--	.01
NOV												
04...	--	.12	9600	5	.30	.05	.15	--	--	--	--	.03
04...	--	.14	10700	4	.32	.05	.14	--	--	--	--	.02
04...	95	.13	10300	--	.32	--	--	.18	--	.50	2.2	.02
24...	91	.13	11000	--	.35	--	--	.20	--	.55	2.4	.03
DEC												
09...	102	.15	11000	--	.43	--	--	.25	--	.68	3.0	.27
13...	--	.19	16400	4	.41	.05	.09	--	--	--	--	.01
JAN												
11...	97	.13	11300	--	.43	--	--	.31	--	.74	3.3	.03
17...	--	.11	9890	7	.40	.05	.13	--	--	--	--	.03
FEB												
09...	--	.14	5970	5	.40	.04	.26	--	--	--	--	.02
09...	--	.14	5970	6	.44	.03	.13	--	--	--	--	.02
23...	104	.16	4430	--	.38	--	--	.35	--	.73	3.2	.03
MAR												
23...	88	.14	10100	--	.29	--	--	.32	--	.61	2.7	.03
31...	--	--	--	--	.37	.08	.28	--	--	--	--	.02
APR												
18...	--	--	--	--	.37	.05	.11	--	--	--	--	.05
20...	73	.11	7840	--	.36	--	--	.36	--	.72	3.2	.05
MAY												
03...	--	.11	7670	7	.37	.06	.06	--	--	--	--	.02
03...	--	.11	7670	7	.37	.06	.09	--	--	--	--	.02
25...	84	.13	8270	--	.33	--	--	.18	--	.51	2.3	.01
JUN												
13...	--	--	--	--	.39	.04	.12	--	--	--	--	.02
29...	87	.14	9370	--	.39	--	--	.26	--	.65	2.9	.02
JUL												
27...	85	.16	13400	--	.30	--	--	2.4	--	2.7	12	.05
AUG												
02...	90	.15	5830	--	.27	--	--	.24	--	.51	2.3	.01
02...	--	.15	6120	8	.25	.12	.12	--	--	--	--	.03
02...	--	.15	6120	7	.25	.10	.10	--	--	--	--	.03
SEP												
29...	90	.11	10700	--	.27	.05	--	--	.14	--	--	.03

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
OCT												
18...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	.03	1100	<2	--	--	<100	<10	60	<1	--	--	<5
04...	.01	300	<2	--	--	<100	<10	100	4	--	--	39
04...	--	--	1	0	1	--	--	--	0	0	0	20
24...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
09...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
09...	.01	200	<2	--	--	<100	<10	60	<1	--	--	<5
09...	.01	<200	<2	--	--	<100	<10	60	<1	--	--	<5
23...	--	--	1	1	0	--	--	--	0	0	0	--
MAR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
18...	--	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
03...	.01	400	<2	--	--	<100	<10	180	1	--	--	<5
03...	.01	<200	<2	--	--	<100	<10	<100	1	--	--	<5
25...	--	--	1	0	1	--	--	--	0	0	0	<10
JUN												
13...	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
27...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	--	--	1	0	1	--	--	--	0	0	0	10
02...	.01	<200	<2	--	--	<100	<10	80	2	--	--	<5
02...	.01	<200	<2	--	--	<100	<10	160	2	--	--	<5
SEP												
29...	.01	--	--	--	--	--	--	--	--	--	--	--

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	FERROUS IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT												
18...	--	--	--	--	--	--	--	--	400	--	--	--
NOV												
04...	--	--	--	--	--	20	--	--	210	<50	60	<10
04...	--	--	--	--	--	190	--	--	340	<50	60	55
04...	20	0	0	0	0	2	2	0	280	0	--	9
24...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
09...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	530	--	--	--
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	390	--	--	--
FEB												
09...	--	--	--	--	--	<10	--	--	320	60	70	15
09...	--	--	--	--	--	<10	--	--	170	<50	70	28
23...	--	0	0	0	0	3	1	2	240	10	--	4
MAR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	120	--	--	--
APR												
18...	--	--	--	--	--	--	--	--	2500	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
03...	--	--	--	--	--	<10	--	--	320	<50	80	<10
03...	--	--	--	--	--	<10	--	--	330	<50	80	<10
25...	0	<10	1	1	0	4	3	1	410	10	--	10
JUN												
13...	--	--	--	--	--	--	--	--	270	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	9	1	0	0	0	3	3	0	300	0	--	11
02...	--	--	--	--	--	60	--	--	170	<50	--	<10
02...	--	--	--	--	--	60	--	--	170	<50	--	<10
SEP												
29...	--	--	--	--	--	--	--	--	--	--	--	--

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)
OCT												
18...	--	--	--	60	--	--	--	--	--	--	--	--
NOV												
04...	--	--	<10	50	<10	<.2	--	--	70	<1	--	--
04...	--	--	<10	20	<10	<.2	--	--	<50	<1	--	--
04...	7	2	--	50	10	.0	.0	.0	--	--	--	0
24...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
09...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	40	--	--	--	--	--	--	--	--
JAN												
11...	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	50	--	--	--	--	--	--	--	--
FEB												
09...	--	--	<10	40	10	<.2	--	--	<50	4	--	--
09...	--	--	<10	30	<10	<.2	--	--	<50	<1	--	--
23...	4	0	--	--	10	.1	.1	.0	--	--	--	0
MAR												
23...	--	--	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	30	--	--	--	--	--	--	--	--
APR												
18...	--	--	--	80	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
03...	--	--	<10	30	<10	<.2	--	--	<50	<1	--	--
03...	--	--	<10	30	<10	<.2	--	--	<50	<1	--	--
25...	2	8	--	70	10	.0	.0	.0	--	0	0	0
JUN												
13...	--	--	--	50	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
02...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	6	5	--	130	50	.0	.0	.0	--	0	0	0
02...	--	--	<10	140	40	<.2	--	--	<50	<2	--	--
02...	--	--	<10	150	60	<.2	--	--	<50	<2	--	--
SEP												
29...	--	--	--	--	--	--	--	--	--	--	--	--

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	SUS-PENDED ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT											
18...	--	--	--	--	--	--	--	--	--	--	--
NOV											
04...	<10	<1000	30	--	--	2.1	--	--	--	--	--
04...	<10	<1000	170	--	--	1.7	--	--	--	--	--
04...	--	--	20	20	0	2.2	--	910	6	638	100
24...	--	--	--	--	--	--	--	2300	5	580	100
DEC											
09...	--	--	--	--	--	--	--	2800	5	514	100
13...	--	--	--	--	--	--	--	--	--	--	--
JAN											
11...	--	--	--	--	--	--	--	1600	8	978	87
17...	--	--	--	--	--	--	--	--	--	--	--
FEB											
09...	<10	<1000	10	--	--	2.3	--	--	--	--	--
09...	<10	<1000	<10	--	--	2.2	--	--	--	--	--
23...	--	--	20	20	0	4.0	--	4000	8	298	93
MAR											
23...	--	--	--	--	--	--	--	--	9	911	87
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
18...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	40	3780	95
MAY											
03...	<10	<1000	<10	--	--	2.5	--	--	--	--	--
03...	<10	<1000	<10	--	--	1.9	--	--	--	--	--
25...	--	--	10	0	10	--	1.1	7700	5	450	100
JUN											
13...	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	6400	10	937	97
JUL											
02...	--	--	--	--	--	--	--	--	8	--	100
27...	--	--	--	--	--	--	--	360	--	--	--
AUG											
02...	--	--	10	0	10	--	--	1300	10	540	89
02...	<10	<1000	10	--	--	1.2	--	--	--	--	--
02...	<10	<1000	10	--	--	1.8	--	--	--	--	--
SEP											
29...	--	--	--	--	--	--	--	4700	10	1270	89

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	159	156	158	158	153	156	176	169	173	182	169	173
2	160	156	158	160	156	158	179	174	177	182	169	173
3	160	155	157	171	154	159	180	176	178	173	170	172
4	165	155	157	160	154	159	181	178	180	172	171	172
5	161	154	157	165	152	158	192	177	181	174	170	172
6	160	152	156	164	149	155	185	176	179	173	172	172
7	161	153	155	167	152	156	193	176	180	176	169	171
8	162	152	155	165	152	155	177	174	175	170	168	169
9	160	153	155	161	150	153	174	171	173	171	163	167
10	158	153	155	162	150	153	173	172	172	166	165	166
11	160	151	153	161	151	153	187	169	176	168	164	165
12	156	148	152	166	152	154	181	171	176	170	168	169
13	157	147	151	163	151	155	176	174	175	171	169	170
14	154	143	147	161	155	156	175	172	174	181	165	170
15	146	140	143	170	155	159	173	170	172	178	161	170
16	142	138	140	168	155	160	172	169	171	172	164	167
17	148	137	140	166	157	160	171	169	170	168	164	166
18	150	138	141	169	155	159	172	170	171	168	163	166
19	153	140	142	166	155	158	172	169	171	170	164	167
20	145	139	142	162	153	157	172	168	171	171	169	170
21	162	144	147	164	152	158	171	168	170	170	168	169
22	150	146	148	162	154	157	172	169	170	170	167	168
23	159	149	151	164	151	159	173	171	172	174	165	169
24	161	149	152	161	155	160	174	170	172	169	168	169
25	162	149	151	169	156	162	182	167	173	171	169	170
26	151	149	151	167	160	163	184	167	176	173	168	171
27	164	150	152	173	160	165	184	171	177	179	170	173
28	153	151	152	178	160	166	184	175	179	174	171	173
29	155	151	153	166	163	164	187	174	179	173	169	171
30	155	152	154	178	162	171	187	172	178	173	171	172
31	156	153	155	---	---	---	181	170	175	178	170	172
MONTH	165	137	151	178	149	159	193	167	175	182	161	170

	FEBRUARY			MARCH			APRIL			MAY		
1	175	169	172	198	183	187	154	150	152	136	130	133
2	181	169	173	195	181	186	153	151	153	133	126	131
3	180	169	174	197	182	186	151	148	150	146	128	132
4	180	169	175	191	180	184	149	147	148	154	127	133
5	180	173	176	194	178	184	---	---	---	154	127	132
6	182	174	177	198	172	184	---	---	---	146	128	132
7	185	172	179	196	170	181	---	---	---	165	127	136
8	181	179	180	195	175	183	---	---	---	155	125	134
9	187	174	180	194	173	181	---	---	---	155	130	135
10	193	174	182	192	172	178	---	---	---	149	130	134
11	190	176	182	194	170	177	---	---	---	164	131	137
12	195	179	185	183	169	172	---	---	---	160	130	138
13	199	178	188	169	166	168	---	---	---	152	133	138
14	195	184	187	166	160	164	---	---	---	168	133	143
15	195	182	187	161	156	159	---	---	---	187	137	153
16	198	184	189	156	153	155	---	---	---	179	139	146
17	195	184	188	154	151	153	---	---	---	164	142	147
18	196	185	189	155	152	153	---	---	---	164	143	148
19	194	186	189	161	149	152	---	---	---	149	144	146
20	195	186	190	158	142	150	---	---	---	166	146	150
21	194	185	189	151	143	147	---	---	---	172	148	153
22	190	186	187	152	146	147	---	---	---	187	149	167
23	189	187	190	152	146	149	---	---	---	186	149	164
24	199	184	189	152	150	151	---	---	---	183	149	160
25	205	182	191	155	148	152	---	---	---	171	149	154
26	197	185	190	154	150	153	---	---	---	153	151	152
27	199	184	190	156	149	153	---	---	---	182	150	155
28	198	181	189	154	148	152	---	---	---	186	150	156
29	---	---	---	153	148	151	132	129	131	231	150	175
30	---	---	---	157	146	151	152	129	133	218	152	168
31	---	---	---	161	150	153	---	---	---	209	155	165
MONTH	205	169	184	198	142	164				231	125	147

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	165	159	163	194	164	172	194	172	178	203	184	191
2	174	162	165	175	164	170	199	171	183	204	184	192
3	176	164	169	185	164	169	203	173	184	206	184	193
4	209	171	179	190	167	173	199	172	184	211	186	198
5	221	173	190	202	165	177	200	173	185	206	186	195
6	196	170	177	192	164	174	191	175	180	205	187	194
7	189	171	177	193	164	170	199	176	184	200	187	191
8	187	176	180	201	162	170	199	178	185	207	187	195
9	203	179	186	214	161	174	202	179	187	205	187	193
10	199	179	187	223	161	178	201	179	187	201	186	191
11	227	180	196	218	161	179	200	179	187	---	---	---
12	238	179	202	204	162	173	200	178	186	---	---	---
13	219	169	185	198	160	169	195	180	184	---	---	---
14	194	165	172	199	159	170	202	180	188	---	---	---
15	176	158	162	194	159	168	200	179	186	---	---	---
16	164	156	158	178	159	167	200	180	187	---	---	---
17	169	155	157	195	159	168	199	180	185	---	---	---
18	155	153	154	198	159	171	196	177	185	---	---	---
19	167	151	155	194	159	169	194	179	184	---	---	---
20	178	150	156	195	159	170	192	179	184	---	---	---
21	180	149	156	196	161	173	202	179	188	---	---	---
22	186	149	158	206	162	178	195	179	185	---	---	---
23	178	152	160	194	161	171	197	178	186	---	---	---
24	160	147	152	199	165	177	201	179	187	---	---	---
25	157	147	150	195	166	174	200	178	187	---	---	---
26	157	150	152	199	164	176	200	179	186	---	---	---
27	150	148	149	188	167	169	193	178	183	---	---	---
28	162	147	151	202	169	179	196	181	186	---	---	---
29	168	149	160	202	166	180	201	181	189	160	156	157
30	189	164	171	190	170	176	205	183	192	176	156	163
31	---	---	---	197	171	179	205	184	192	---	---	---
MONTH	238	147	168	223	159	173	205	171	186			
YEAR	238	125	167									

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	22.0	22.0	15.0	15.0	15.0	9.0	9.0	9.0	5.5	5.0	5.0
2	22.5	22.0	22.0	15.0	14.5	15.0	9.0	9.0	9.0	5.0	4.5	5.0
3	22.5	22.0	22.0	15.0	14.5	14.5	9.0	8.5	9.0	4.5	4.5	4.5
4	22.5	22.0	22.0	14.5	14.0	14.5	8.5	8.5	8.5	4.5	4.5	4.5
5	22.0	22.0	22.0	14.0	13.5	14.0	8.5	8.5	8.5	4.5	4.5	4.5
6	22.0	22.0	22.0	13.5	13.5	13.5	8.5	8.5	8.5	4.5	4.5	4.5
7	22.0	22.0	22.0	13.5	13.5	13.5	8.5	8.5	8.5	4.5	4.0	4.5
8	22.0	21.5	21.5	13.0	13.0	13.0	8.5	8.0	8.5	4.5	4.0	4.0
9	21.5	21.0	21.5	13.0	12.5	12.5	8.0	8.0	8.0	4.5	4.5	4.5
10	21.0	20.5	21.0	13.0	12.5	12.5	8.0	8.0	8.0	4.5	4.0	4.5
11	20.5	20.5	20.5	12.5	12.0	12.5	8.0	8.0	8.0	4.0	4.0	4.0
12	20.5	20.0	20.5	12.5	12.0	12.0	8.0	8.0	8.0	4.0	4.0	4.0
13	20.5	20.0	20.5	12.0	11.5	12.0	8.0	7.5	8.0	4.0	4.0	4.0
14	20.5	20.0	20.0	11.5	11.5	11.5	7.5	7.5	7.5	4.0	4.0	4.0
15	20.0	20.0	20.0	11.5	11.0	11.0	7.5	7.5	7.5	4.0	4.0	4.0
16	20.0	20.0	20.0	11.0	10.5	11.0	7.5	7.5	7.5	4.0	3.5	3.5
17	20.0	19.5	20.0	11.0	11.0	11.0	7.5	7.5	7.5	3.5	3.0	3.0
18	19.5	19.0	19.5	11.0	10.5	11.0	8.0	7.5	7.5	3.5	2.5	3.0
19	19.0	19.0	19.0	11.0	10.5	11.0	8.0	7.0	7.5	3.0	2.5	3.0
20	19.0	18.5	19.0	11.0	10.5	11.0	8.0	7.5	7.5	3.0	2.5	3.0
21	18.5	18.5	18.5	10.5	10.0	10.5	7.5	7.0	7.5	3.0	2.5	2.5
22	18.5	18.0	18.0	10.5	10.0	10.5	7.5	7.0	7.0	2.5	2.5	2.5
23	18.0	17.5	18.0	10.5	10.0	10.0	7.0	7.0	7.0	2.5	2.0	2.5
24	17.5	17.5	17.5	10.0	10.0	10.0	7.0	6.5	6.5	2.5	2.5	2.5
25	17.5	17.0	17.5	10.0	9.5	10.0	6.5	6.5	6.5	2.5	2.5	2.5
26	17.0	17.0	17.0	10.0	10.0	10.0	6.5	6.5	6.5	2.5	2.5	2.5
27	16.5	16.0	16.5	10.0	10.0	10.0	6.5	6.0	6.5	2.5	2.5	2.5
28	16.0	16.0	16.0	10.5	10.0	10.0	6.5	5.5	6.5	2.5	2.5	2.5
29	16.0	15.5	15.5	10.0	9.5	10.0	6.0	5.0	5.5	2.5	2.0	2.5
30	15.5	15.5	15.5	9.5	9.0	9.5	6.0	5.0	6.0	2.5	2.5	2.5
31	15.5	15.0	15.5	---	---	---	6.0	5.0	5.5	3.0	2.5	2.5
MONTH	22.5	15.0	19.5	15.0	9.0	12.0	9.0	5.0	7.5	5.5	2.0	3.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	2.5	2.5	7.0	6.0	6.5	14.0	13.5	14.0	18.0	17.0	17.5
2	3.0	2.5	2.5	7.0	6.5	7.0	14.5	14.0	14.0	18.0	17.0	17.5
3	3.0	2.5	2.5	7.0	6.5	7.0	14.5	13.5	14.0	18.5	17.5	18.0
4	3.0	2.5	3.0	7.5	6.5	7.0	14.5	13.5	14.0	18.0	17.5	18.0
5	3.0	3.0	3.0	7.5	7.0	7.0	---	---	---	18.0	17.0	17.5
6	3.0	2.5	3.0	7.5	7.5	7.5	---	---	---	18.5	17.0	18.0
7	3.0	2.5	2.5	8.0	7.5	8.0	---	---	---	18.5	17.5	18.0
8	3.0	2.5	3.0	9.0	7.5	8.0	---	---	---	19.0	17.0	18.0
9	3.0	2.5	3.0	9.5	7.5	8.5	---	---	---	20.0	18.0	19.5
10	4.0	3.0	3.0	8.5	8.0	8.5	---	---	---	19.5	19.0	19.0
11	3.5	3.0	3.0	9.0	8.5	9.0	---	---	---	19.0	18.5	19.0
12	3.5	3.5	3.5	9.5	9.0	9.0	---	---	---	19.0	18.5	19.0
13	3.5	3.5	3.5	10.0	9.5	9.5	---	---	---	19.5	18.5	19.0
14	4.5	3.5	4.0	10.5	9.5	10.0	---	---	---	19.5	18.5	19.0
15	4.0	3.5	4.0	10.5	10.0	10.5	---	---	---	20.0	18.5	19.0
16	4.0	3.5	4.0	11.0	10.5	11.0	---	---	---	20.0	19.0	19.5
17	5.0	4.0	4.0	11.5	11.0	11.0	---	---	---	20.0	19.0	19.5
18	5.5	4.0	4.5	12.0	11.0	11.5	---	---	---	20.5	19.0	19.5
19	5.5	4.0	4.5	12.0	11.5	12.0	---	---	---	20.5	19.0	20.0
20	5.0	4.5	4.5	12.0	11.5	12.0	---	---	---	20.5	19.0	20.0
21	6.0	4.5	5.0	12.0	12.0	12.0	---	---	---	20.0	19.0	19.5
22	5.0	4.5	4.5	12.0	12.0	12.0	---	---	---	20.0	19.5	19.5
23	5.0	5.0	5.0	12.0	11.0	11.5	---	---	---	20.5	19.5	20.0
24	5.5	5.0	5.5	12.0	11.5	12.0	---	---	---	21.5	20.0	20.5
25	6.0	5.5	5.5	12.0	11.0	12.0	---	---	---	22.0	20.0	21.0
26	6.0	6.0	6.0	12.5	12.0	12.5	---	---	---	22.0	20.5	21.5
27	7.0	6.5	6.5	13.0	12.5	12.5	---	---	---	22.0	20.0	21.0
28	7.0	6.0	6.5	13.0	12.0	12.5	---	---	---	22.0	20.5	21.5
29	---	---	---	13.5	13.0	13.0	17.5	16.5	17.0	22.0	20.5	21.0
30	---	---	---	13.5	13.0	13.5	17.5	16.5	17.5	22.0	20.5	21.5
31	---	---	---	14.0	13.0	13.5	---	---	---	22.0	20.5	21.5
MONTH	7.0	2.5	4.0	14.0	6.0	10.0				22.0	17.0	19.5

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.5	21.5	22.0	24.5	23.5	24.0	27.0	26.0	26.5	28.5	27.0	28.0
2	22.5	20.5	22.0	25.5	24.0	24.5	27.0	26.0	26.5	28.5	27.0	28.0
3	22.5	21.5	22.0	25.5	24.0	24.5	26.5	26.0	26.0	28.5	27.5	28.0
4	22.5	21.5	22.0	25.0	24.5	25.0	26.5	25.5	26.0	28.5	27.5	28.0
5	22.5	21.5	22.0	26.0	24.5	25.0	26.5	25.5	26.0	28.5	27.0	28.0
6	24.0	21.5	22.5	26.5	24.0	25.5	26.5	26.0	26.0	28.5	27.5	28.0
7	24.0	23.0	23.5	26.5	24.0	25.5	26.5	26.0	26.5	28.5	27.5	28.0
8	23.0	22.5	22.5	26.5	24.5	26.0	27.0	26.0	26.5	28.5	28.0	28.0
9	24.0	22.0	23.0	27.0	25.0	26.0	27.0	26.0	26.5	28.5	27.5	28.0
10	23.5	22.5	23.0	26.5	25.5	26.0	27.0	26.0	26.5	28.5	27.5	28.0
11	23.5	22.0	23.0	26.5	25.0	25.5	27.0	26.0	26.5	---	---	---
12	24.0	22.5	23.0	27.0	25.0	26.0	27.5	26.0	26.5	---	---	---
13	24.0	22.0	23.0	27.0	25.5	26.5	27.0	26.5	26.5	---	---	---
14	23.0	22.0	23.0	27.5	26.0	26.5	27.0	26.5	26.5	---	---	---
15	24.0	22.5	23.0	28.0	26.0	27.0	27.5	26.5	27.0	---	---	---
16	23.5	22.5	23.5	28.0	25.5	27.0	27.0	26.0	26.5	---	---	---
17	23.5	22.5	23.0	28.0	26.0	27.0	27.0	26.0	26.5	---	---	---
18	23.0	22.5	23.0	28.0	26.5	27.0	28.0	26.5	27.0	---	---	---
19	23.5	22.5	23.0	28.0	26.5	27.0	27.5	26.5	27.0	---	---	---
20	23.5	22.5	23.0	27.5	26.5	27.0	27.5	26.5	27.0	---	---	---
21	24.0	22.5	23.5	28.0	26.5	27.0	27.0	26.5	27.0	---	---	---
22	23.5	22.5	23.5	28.0	26.5	27.0	27.5	26.5	27.0	---	---	---
23	24.0	23.0	23.5	28.0	26.5	27.0	27.5	26.5	27.0	---	---	---
24	24.0	23.5	23.5	27.0	26.5	27.0	27.0	26.5	27.0	---	---	---
25	24.5	23.0	23.5	27.0	26.5	26.5	27.5	26.5	27.0	---	---	---
26	24.0	22.5	23.5	28.5	26.5	27.5	27.5	26.5	27.0	---	---	---
27	24.0	23.5	24.0	27.5	26.0	27.0	28.0	26.5	27.0	---	---	---
28	24.0	23.5	24.0	27.0	26.0	26.5	28.0	27.0	27.5	---	---	---
29	24.5	23.0	24.0	26.5	25.5	26.0	28.0	27.0	27.5	25.0	25.0	25.0
30	24.5	23.5	24.0	26.5	26.0	26.0	28.0	27.0	27.5	25.0	24.5	24.5
31	---	---	---	27.0	26.0	26.5	28.5	27.0	28.0	---	---	---
MONTH	24.5	20.5	23.0	28.5	23.5	26.0	28.5	25.5	27.0			
YEAR	28.5	2.0	16.0									

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	NOV 4,76	NOV 24,76	DEC 9,76	JAN 11,77	FEB 23,77
TIME	1200	1115	1130	1200	1200
TOTAL CELLS/ML	910	2300	2800	1600	4000
DIVERSITY: DIVISION	1.1	1.4	0.7	1.3	0.3
.CLASS	1.1	1.4	0.7	1.7	0.3
..ORDER	1.5	1.5	1.0	2.0	0.6
...FAMILY	1.5	1.6	1.0	2.1	0.6
....GENUS	1.5	1.9	1.7	2.7	1.2

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	58	2	59	2	21	1	33	1
....CHODATELLA	--	-	--	-	*	0	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	51	6	38	2	--	-	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	--	-	--	-	20	1	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	25	3	29	1	*	0	86	5	98	2
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	130	6	--	-	300#	18	3100#	79
....MELOSIRA	600#	66	1400#	60	1900#	68	620#	38	520	13
....STEPHANODISCUS	--	-	*	0	440#	16	11	1	--	-
..PENNALES										
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	78	3	--	-	65	2
....SYNEDRA	--	-	--	-	39	1	--	-	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	--	-	11	1	--	-
...NAVICULACEAE										
....NAVICULA	64	7	--	-	--	-	11	1	--	-
...NITZSCHIACEAE										
....NITZSCHIA	--	-	--	-	--	-	43	3	65	2
...SURIRELLACEAE										
....SURIRELLA	--	-	*	0	--	-	11	1	33	1
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBRYON	--	-	--	-	*	0	64	4	--	-
....OCHROMONAS	--	-	--	-	--	-	64	4	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....ANACYSTIS	170#	18	--	-	--	-	110	7	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	--	-	460#	20	180	6	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	120	5	69	2	21	1	--	-
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	58	2	--	-	260#	16	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	*	0	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...PERIDINIACEAE										
....PERIDINIUM	--	-	*	0	--	-	--	-	33	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	JUN 29,77		JUL 27,77		AUG 2,77		SEP 29,77	
TIME	1100		1050		1020		1030	
TOTAL CELLS/ML	6400		360		1300		4700	
DIVERSITY: DIVISION	1.6		1.3		0.8		1.5	
.CLASS	1.6		1.3		0.8		1.5	
..ORDER	2.2		1.7		1.4		2.2	
...FAMILY	2.5		1.8		1.5		2.4	
....GENUS	2.6		1.8		2.3		2.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	47	4	670	14
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	12	1	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	150	2	--	-	19	1	--	-
....KIRCHNERIELLA	*	0	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	250	5
....TETRAEDRON	74	1	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	83	2
...SCENEDESMACEAE								
....SCENEDESMUS	420	6	--	-	10	1	--	-
..TETRASPORALES								
...PALMELLACEAE								
....GLOEOCYSTIS	180	3	--	-	--	-	--	-
..ULOTRICHALES								
...ULOTRICHACEAE								
....ULOTHRIX	460	7	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	*	0	--	-	--	-	--	-
...PHACOTACEAE								
....PTEROMONAS	*	0	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	10	1	--	-
....STAURASTRUM	*	0	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	74	1	6	2	--	-	--	-
....MELOSIRA	590	9	--	-	54	4	1100#	24
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	100	2	--	-	--	-	83	2
...CYMBELLACEAE								
....RHOPALODIA	--	-	6	2	--	-	--	-
...FRAGILARIACEAE								
....SYNEDRA	270	4	190#	53	25	2	170	4
...NITZSCHIACEAE								
....NITZSCHIA	470	7	--	-	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...CHROMULINACEAE								
....CHRYSOCOCCUS	*	0	--	-	--	-	--	-
...OCHROMONADACEAE								
....DINOBRYON	*	0	--	-	--	-	--	-

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE TIME	JUN 29,77 1100		JUL 27,77 1050		AUG 2,77 1020		SEP 29,77 1030	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....AGMENELLUM	--	-	--	-	44	3	--	-
....ANACYSTIS	--	-	42	12	140	10	830#	18
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	83#	23	--	-	--	-
....CYLINDROSPERMUM	--	-	--	-	--	-	1500#	32
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	620#	47	--	-
....OSCILLATORIA	3400#	53	--	-	320#	24	--	-
....PHORMIDIUM	--	-	--	-	10	1	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	*	0	--	-	--	-	--	-
...CRYPTOMONODACEAE								
....CRYPTOMONAS	44	1	--	-	--	-	--	-
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	59	1	30	8	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...PERIDINIACEAE								
....PERIDINIUM	--	-	--	-	*	0	--	-

03543500 SEWEE CREEK NEAR DECATUR, TN

LOCATION.--Lat 35°34'53", long 84°44'53", Meigs County, Hydrologic Unit 06020001, on right bank, 0.3 mi (0.5 km) downstream from bridge on State Highway 58, 0.5 mi (0.8 km) downstream from Dry Fork, 5.0 mi (8.0 km) north of Decatur, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--117 mi^2 (303 km^2).

PERIOD OF RECORD.--May 1934 to current year. Prior to October 1935, published as Suee Creek near Decatur.

REVISED RECORDS.--WSP 1910: 1936(M), 1939(M), 1943(M), 1946, 1948(M), 1949, 1951, 1957, 1958(P). WSP 2110: 1951 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 694.32 ft (211.629 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--43 years, 194 ft^3/s (5.494 m^3/s), 22.52 in/yr (572 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,900 ft^3/s (677 m^3/s) Jan. 7, 1946, gage height, 23.97 ft (7.306 m), from floodmarks, from rating curve extended above 11,300 ft^3/s (320 m^3/s) on basis of slope-area measurement at gage height 22.81 ft (6.952 m); minimum, 11 ft^3/s (0.31 m^3/s) Sept. 24, 1935, Jan. 7-10, Oct. 4, 5, 7, 11, 12, 14, 15, 1940; minimum gage height, 0.15 ft (0.046 m) Sept. 2, 3, 7-9, 13, 20, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft^3/s (65.1 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	0630	3130	88.6	8.05	2.454	Apr. 5	0500	*7150	202	14.27	4.349
Mar. 30	1830	2310	65.4	6.34	1.932						

Minimum discharge, 22 ft^3/s (0.62 m^3/s) Oct. 3-6, July 21, 22, Sept. 2, 3, 4; gage height, 0.26 ft (0.079 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	95	107	181	86	233	489	80	42	45	28	24
2	25	72	85	148	80	200	410	80	40	75	37	24
3	24	62	73	139	78	177	2030	87	39	48	121	22
4	22	54	64	126	77	253	3540	95	37	42	40	47
5	22	48	58	160	79	248	5110	80	37	39	32	27
6	27	44	74	233	72	377	1210	74	36	37	29	25
7	44	40	406	316	67	355	731	106	40	35	28	284
8	34	39	262	256	62	279	524	122	37	34	64	346
9	41	36	164	369	62	233	409	87	35	32	241	85
10	40	35	128	639	61	205	337	77	34	36	67	62
11	34	35	109	351	61	183	281	74	33	32	45	57
12	31	36	218	265	77	679	241	67	32	30	37	49
13	29	34	226	220	120	2280	216	64	34	30	33	126
14	28	32	166	407	94	760	198	61	57	29	35	393
15	28	35	186	386	85	498	178	61	46	28	34	749
16	28	34	179	276	75	374	163	58	39	27	31	953
17	27	31	144	208	68	283	148	56	36	26	39	861
18	26	30	120	187	67	243	136	56	36	26	36	424
19	26	30	101	158	67	194	128	50	91	26	32	396
20	32	30	132	143	67	205	122	50	47	24	29	351
21	37	29	155	124	64	161	106	50	56	24	27	213
22	31	28	116	110	61	156	111	111	42	181	26	161
23	28	27	107	98	62	140	200	91	65	52	26	132
24	34	27	94	98	476	122	183	61	48	34	28	112
25	176	28	98	98	313	111	140	58	99	33	29	99
26	314	30	180	96	230	101	117	53	227	56	27	255
27	93	53	162	244	317	95	106	50	97	38	26	319
28	65	126	148	184	287	95	95	50	62	32	24	308
29	53	361	130	125	---	117	91	47	58	31	24	190
30	62	157	107	102	---	1600	87	45	49	33	24	153
31	177	---	245	94	---	907	---	42	---	31	24	---
TOTAL	1664	1718	4544	6541	3315	11864	17837	2143	1631	1246	1323	7247
MEAN	53.7	57.3	147	211	118	383	595	69.1	54.4	40.2	42.7	242
MAX	314	361	406	639	476	2280	5110	122	227	181	241	953
MIN	22	27	58	94	61	95	87	42	32	24	24	22
CFSM	.46	.49	1.26	1.80	1.01	3.27	5.09	.59	.47	.34	.37	2.07
IN.	.53	.55	1.44	2.08	1.05	3.77	5.67	.68	.52	.40	.42	2.30

CAL YR 1976 TOTAL 55057 MEAN 150 MAX 1940 MIN 20 CFSM 1.28 IN 17.51
WTR YR 1977 TOTAL 61073 MEAN 167 MAX 5110 MIN 22 CFSM 1.43 IN 19.42

03556500 HIWASSEE RIVER NEAR MCFARLAND, TN

LOCATION.--Lat 35°10'48", long 84°26'36", Polk County, Hydrologic Unit 06020002, on left bank 0.2 mi (0.3 km) downstream from Smith Creek, 0.4 mi (0.6 km) downstream from Apalachia powerhouse of Tennessee Valley Authority, 2.8 mi (4.5 km) west of McFarland, and at mile 53.2 (85.6 km).

DRAINAGE AREA.--1,136 mi^2 (2,942 km^2).

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 830.56 ft (253.155 m) above mean sea level.

REMARKS.--Records fair. Flow regulated by four reservoirs (see Water Resources Data for North Carolina and Georgia, 1977). Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years, 2,430 ft^3/s (68.82 m^3/s), 29.05 in/yr (738 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,100 ft^3/s (1,330 m^3/s) May 28, 1973, gage height, 15.34 ft (4.676 m), from rating curve extended above 15,000 ft^3/s (425 m^3/s) on basis of slope-area measurement of peak flow; minimum daily, 30 ft^3/s (0.85 m^3/s) estimated, Sept. 18-20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,280 ft^3/s (206 m^3/s) Apr. 5, gage height, 5.82 ft (1.774 m); minimum, 127 ft^3/s (3.60 m^3/s) Aug. 7, gage height, 1.48 ft (0.451 m); minimum daily, 500 ft^3/s (14.2 m^3/s) Mar. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2870	3000	3100	2800	2700	620	1900	1500	2370	2620	2560	2550
2	2860	3020	3050	2750	2450	750	1680	1510	2330	2290	2590	2500
3	2840	2970	2970	2700	1150	500	2360	1570	2300	2240	2630	2500
4	2820	3010	3060	2700	2000	560	2770	1570	2140	2220	2550	1900
5	2830	3000	3140	2700	1750	520	4660	1540	1700	2540	2570	1900
6	2830	2960	3160	2700	1900	900	2260	1510	2270	2570	2310	2450
7	2860	2940	3270	2850	2500	900	2430	1500	2280	2510	1710	3200
8	2980	2950	3350	2750	2400	680	3410	1540	2300	2540	2680	3800
9	3000	2940	2480	3000	1750	580	3320	1490	2270	2240	2570	2900
10	2900	2950	2580	3600	1650	900	3260	1490	2290	2240	2640	2600
11	2870	2970	2580	3350	1650	1550	3200	1490	1880	2490	2610	2200
12	2860	2980	2670	3300	1750	1100	3320	1730	1530	2540	2510	2500
13	2850	2960	2780	3200	1700	2650	4280	1710	1810	2680	2960	2050
14	2850	2950	2760	3250	1600	1550	4350	2590	1910	2790	3050	2000
15	2800	2930	2860	3250	2050	2200	4080	2350	1830	3010	3090	2900
16	2780	2890	2880	3200	2600	2100	3200	2710	1830	2300	3160	3200
17	2810	2890	2820	3150	1900	2000	3150	2640	1810	2230	3080	3150
18	2790	2000	2840	3150	1600	2100	3140	2670	1830	2590	2600	2250
19	2780	1320	2900	3150	1150	1950	3160	2670	1550	2570	2570	2850
20	2780	1600	3200	3100	1150	1900	3160	2700	1860	2540	2590	3050
21	2790	2000	3350	3100	1950	1180	3140	2690	1850	2570	2600	3000
22	2790	3000	2850	3100	1800	1300	3150	2680	1810	2580	2650	2900
23	2790	3000	3200	3100	1100	1450	3170	2700	1840	2320	2500	2900
24	2800	2950	3200	3100	1550	1350	3220	2440	1960	2260	2550	2900
25	2900	2950	3150	3100	600	1150	3130	2470	2040	2620	2550	2900
26	3040	2950	3200	3050	520	1400	3120	1820	1770	2620	2550	3150
27	2950	3000	3250	3050	700	1400	2750	1980	1870	2620	2550	3050
28	2900	3200	3200	3150	1300	1400	1540	2210	2390	2580	1800	3000
29	2880	3550	3150	3100	---	1600	1510	1760	2770	2600	2550	2900
30	2910	3200	3150	3100	---	3400	1500	2130	2600	2600	2500	3000
31	3060	---	2900	3100	---	2450	---	2510	---	1600	2450	---
TOTAL	88770	85030	93050	94700	46920	44090	89320	63870	60990	76720	80280	82150
MEAN	2864	2834	3002	3055	1676	1422	2977	2060	2033	2475	2590	2738
MAX	3060	3550	3350	3600	2700	3400	4660	2710	2770	3010	3160	3800
MIN	2780	1320	2480	2700	520	500	1500	1490	1530	1600	1710	1900

CAL YR 1976 TOTAL 974654 MEAN 2663 MAX 6440 MIN 366 MEAN‡ 2661 CFSM‡ 2.34 IN.‡ 31.88
WTR YR 1977 TOTAL 905890 MEAN 2482 MAX 4660 MIN 500 MEAN‡ 2402 CFSM‡ 2.11 IN.‡ 28.71

‡ Adjusted for change in contents in Chatuge, Hiwassee, Apalachia (North Carolina), and Nottely (Georgia) Lakes.

NOTE.--No gage-height record Dec. 20 to Apr. 1, Aug. 22 to Sept. 30.

03557400 HIWASSEE RIVER AT PATTY, TN

LOCATION.--Lat 35°13'32", long 84°38'45", Polk County, Hydrologic Unit 06020002, on the first pier from the right bank, on the downstream side of Patty Bridge, 1.8 mi (2.9 km) northeast of Benton, and at mile 36.9 (59.4 km).

DRAINAGE AREA.--1,358 mi^2 (3,517 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1975 to current year.

INSTRUMENTATION.--Single point water temperature recorder since November 1975.

REMARKS.--No record Feb. 2, 3, Aug. 29 to Sept. 2. Flow regulated by four reservoirs (see Water Resources Data for North Carolina and Georgia, 1977).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.0°C Sept. 4, 5, 1977; minimum, 1.0°C Jan. 29, Feb. 8, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 22.0°C Sept. 4, 5; minimum, 1.0°C Jan. 29, Feb. 8.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.0	19.0	14.5	13.5	14.0	9.0	6.5	8.0	4.5	3.5	4.0
2	19.5	18.0	18.5	14.5	12.0	13.5	9.5	8.0	8.5	4.5	3.5	4.0
3	19.0	17.0	18.0	15.5	13.0	14.0	10.0	8.0	9.0	5.0	4.5	4.5
4	18.0	15.5	16.5	15.0	13.5	14.0	10.0	8.5	9.0	6.0	5.0	5.5
5	18.0	15.5	16.5	14.0	12.0	13.5	10.0	8.5	9.0	6.5	6.0	6.5
6	18.0	15.5	16.5	14.5	12.0	13.5	9.5	8.5	9.0	6.5	6.0	6.0
7	16.5	15.5	16.0	14.5	13.0	13.5	9.5	8.5	9.0	6.0	5.0	5.5
8	16.5	15.0	15.5	13.0	11.5	12.0	8.5	7.0	8.0	5.5	4.5	5.0
9	15.5	14.5	15.0	14.0	11.5	13.0	8.0	6.0	7.0	5.5	5.5	5.5
10	16.5	13.5	15.0	14.0	13.0	13.5	8.5	6.5	8.0	5.5	4.0	5.0
11	16.5	14.0	15.5	13.5	11.5	13.0	9.0	8.5	9.0	4.0	3.0	3.5
12	16.5	14.0	15.5	13.0	11.0	11.5	9.0	9.0	9.0	4.0	3.0	3.5
13	17.0	14.0	15.5	12.0	10.5	11.0	9.0	8.0	8.5	5.0	3.5	4.0
14	16.5	14.5	15.5	11.5	10.5	11.0	8.5	6.5	7.0	5.5	4.5	5.0
15	17.0	13.5	15.5	11.5	11.0	11.0	8.5	8.0	8.0	5.5	5.0	5.0
16	16.5	15.0	15.5	12.0	11.0	11.5	8.5	8.0	8.0	5.0	3.0	4.5
17	16.0	15.0	15.5	11.5	11.0	11.0	8.5	6.5	8.0	3.5	1.5	2.0
18	16.0	14.0	15.0	13.0	10.5	11.5	8.5	6.5	8.0	3.5	2.0	3.0
19	16.0	13.5	15.0	11.5	10.0	11.0	9.0	6.5	8.0	3.5	1.5	2.0
20	15.5	14.5	15.0	13.0	11.0	11.0	8.5	7.0	8.5	3.5	2.0	3.0
21	15.0	14.0	14.5	11.0	10.0	10.5	7.0	5.5	6.0	4.0	1.5	3.0
22	16.0	13.0	14.5	10.5	9.5	10.0	6.0	4.5	5.0	4.0	2.0	3.0
23	15.5	13.5	15.0	10.5	9.0	10.0	6.5	5.0	5.5	4.0	2.0	3.0
24	16.0	14.5	14.5	11.0	9.5	10.0	6.5	5.0	5.5	4.0	3.0	3.5
25	15.5	15.0	15.5	11.5	9.0	10.5	6.0	5.5	5.5	4.0	3.5	3.5
26	15.5	14.0	14.5	11.0	10.0	10.5	6.5	6.0	6.0	4.5	3.0	3.5
27	14.5	13.5	14.0	12.0	11.0	11.5	7.0	6.0	6.0	4.5	4.0	4.0
28	14.5	13.0	13.5	11.5	10.5	11.0	7.0	6.5	6.5	4.0	2.0	3.5
29	14.5	12.0	13.5	10.5	7.0	9.0	6.5	6.0	6.0	3.5	1.0	2.0
30	14.5	13.5	14.0	8.5	6.5	8.0	6.5	5.5	5.5	4.0	1.5	3.0
31	14.5	13.5	14.0	---	---	---	6.5	5.5	5.5	3.5	2.0	3.0
MONTH	19.5	2.0	15.5	15.5	6.5	11.5	10.0	4.5	7.5	6.5	1.0	4.0

03557400 HIWASSEE RIVER AT PATTY, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	1.5	3.0	8.0	6.5	7.0	15.5	11.5	13.0	15.0	13.5	14.0
2	---	---	---	8.0	5.5	6.5	14.0	12.0	13.0	15.0	13.0	14.0
3	---	---	---	9.0	7.0	8.0	15.0	13.5	14.0	14.0	13.5	14.0
4	5.0	3.5	4.0	11.0	9.0	9.5	14.5	13.5	14.0	15.0	13.5	14.0
5	6.0	3.5	4.0	10.5	9.5	10.0	13.5	11.5	13.0	16.0	14.0	15.0
6	4.0	2.0	3.0	10.0	9.0	9.5	13.0	10.0	11.0	16.5	14.5	15.5
7	3.5	1.5	3.0	9.0	8.5	9.0	13.5	9.5	11.5	16.5	14.5	15.5
8	4.0	1.0	3.0	9.0	8.0	8.5	13.0	10.5	11.5	17.0	14.5	15.5
9	4.5	1.5	3.0	9.5	8.0	9.0	13.0	10.0	11.5	17.0	14.5	15.5
10	5.0	2.0	3.5	10.5	9.0	9.5	13.5	10.5	12.0	15.5	13.0	14.0
11	4.5	3.0	3.5	11.0	10.0	10.5	14.0	11.0	13.0	15.0	12.0	14.0
12	5.0	4.0	4.0	13.0	10.0	11.5	14.0	11.5	13.0	15.5	13.0	14.5
13	6.0	4.0	4.5	13.0	11.0	11.5	13.0	10.5	11.5	16.0	13.0	14.5
14	5.5	3.5	4.0	13.0	10.5	11.5	13.0	10.5	11.5	16.0	12.0	14.0
15	5.5	3.5	4.5	12.0	10.5	11.0	13.0	10.5	12.0	16.0	12.0	14.5
16	4.0	2.0	3.5	12.0	9.5	11.0	14.0	10.0	12.0	16.0	12.0	14.5
17	4.0	1.5	3.0	10.0	8.5	9.5	13.5	11.0	12.0	16.0	12.0	14.5
18	5.5	3.0	4.5	12.0	9.0	10.5	12.0	11.0	11.5	16.0	13.0	14.5
19	6.0	3.5	4.5	10.5	9.0	9.5	13.5	11.0	12.0	16.5	13.0	15.0
20	5.5	4.0	4.5	12.0	9.0	10.0	14.0	11.5	13.0	16.5	13.0	15.0
21	5.0	3.5	4.0	10.5	9.0	9.5	13.5	12.0	13.0	16.5	13.5	15.0
22	6.0	3.5	4.5	9.5	8.0	9.0	13.5	13.0	13.0	16.0	13.5	14.5
23	7.0	5.0	5.5	9.5	6.5	8.5	14.0	12.0	13.5	16.0	13.5	14.5
24	8.5	6.5	8.0	10.0	8.0	9.0	13.5	12.0	13.0	15.5	13.5	14.5
25	9.0	7.0	8.5	12.0	9.0	10.5	13.0	11.5	12.0	15.5	14.0	15.0
26	11.0	9.0	10.0	11.0	9.0	10.5	11.5	10.0	10.5	16.5	14.0	15.5
27	11.0	9.0	10.0	11.5	9.5	11.0	13.0	9.5	11.0	16.5	14.0	15.5
28	9.0	8.0	8.5	13.0	11.0	12.0	14.0	11.0	13.0	16.5	15.0	15.5
29	---	---	---	13.0	11.5	12.0	14.0	12.0	13.0	19.0	14.5	16.5
30	---	---	---	15.5	12.0	13.5	14.5	12.0	13.5	18.5	14.5	16.5
31	---	---	---	16.0	14.5	15.0	---	---	---	18.5	15.0	16.5
MONTH	11.0	1.0	5.0	16.0	5.5	10.0	15.5	9.5	12.5	19.0	12.0	15.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	14.5	16.0	18.5	16.0	17.0	20.0	17.0	18.5	---	---	---
2	17.0	14.5	15.5	19.0	16.0	17.0	20.0	17.0	18.5	---	---	---
3	18.0	14.5	16.0	19.5	15.5	18.0	19.5	17.0	18.5	21.5	19.0	20.5
4	18.0	14.0	16.0	19.5	16.0	18.0	19.5	17.0	18.5	22.0	19.0	20.5
5	19.0	14.5	16.5	19.5	16.0	17.0	20.5	17.0	19.0	22.0	19.5	20.5
6	18.0	14.5	16.0	19.5	16.0	18.0	20.5	18.0	19.5	20.5	19.0	20.0
7	17.0	14.5	16.0	19.5	16.0	18.0	21.0	18.5	19.5	20.0	19.0	19.5
8	17.0	13.5	15.0	19.5	16.0	18.0	19.5	18.0	19.0	21.0	19.5	20.5
9	17.0	14.0	15.5	19.5	16.0	18.0	19.0	18.0	18.5	21.0	19.5	20.0
10	17.0	13.5	15.5	19.5	16.5	18.0	20.5	18.0	19.0	20.5	19.0	20.0
11	18.0	14.0	16.0	19.5	16.5	18.0	20.5	18.0	19.5	21.0	19.0	20.0
12	20.0	15.5	18.0	19.5	16.0	17.0	20.5	18.0	19.5	20.5	18.0	19.5
13	19.5	16.0	18.0	20.0	16.0	18.0	20.5	17.0	19.0	20.0	18.5	19.5
14	18.5	16.0	17.0	19.5	16.0	18.0	20.0	17.0	19.0	21.0	18.5	20.0
15	19.0	16.0	17.0	19.5	16.0	18.0	19.5	18.0	18.5	20.5	19.5	20.0
16	18.5	16.0	17.0	19.5	16.5	18.0	21.0	17.0	19.5	20.5	19.5	20.0
17	16.5	15.5	16.0	19.0	16.5	18.0	19.5	18.0	19.0	20.5	19.5	20.0
18	18.5	15.5	17.0	19.5	16.0	18.0	20.5	18.0	19.5	20.5	19.0	20.0
19	20.5	16.5	18.5	19.5	16.0	18.0	20.5	18.0	19.0	20.0	19.0	19.5
20	18.0	16.0	17.0	19.5	16.0	18.0	20.0	18.5	19.0	20.5	19.0	19.5
21	19.5	16.0	18.0	19.5	16.0	18.0	20.0	18.5	19.0	20.0	18.5	19.5
22	19.0	16.0	18.0	19.0	16.5	18.0	20.0	18.5	19.0	20.5	18.5	19.0
23	19.0	16.5	18.0	20.0	17.0	18.5	20.0	18.5	19.0	20.5	18.5	19.5
24	19.5	15.5	18.0	20.0	17.0	18.5	20.5	18.0	19.5	20.5	19.0	19.5
25	19.0	16.0	18.0	19.0	17.0	18.0	20.5	18.5	19.5	20.0	19.0	19.5
26	19.0	16.0	17.0	20.0	17.0	18.5	21.0	19.0	20.0	19.5	19.0	19.0
27	19.5	16.5	18.5	20.0	16.5	18.5	20.5	19.0	20.0	20.0	19.0	19.5
28	18.5	16.0	17.0	19.0	16.5	18.0	21.0	19.0	20.0	20.0	19.0	19.5
29	18.0	15.5	16.5	18.5	16.5	17.0	---	---	---	20.5	19.5	20.0
30	18.5	15.5	17.0	20.0	16.5	18.0	---	---	---	20.0	19.0	19.5
31	---	---	---	21.0	17.0	19.0	---	---	---	---	---	---
MONTH	20.5	13.5	17.0	21.0	15.5	18.0	21.0	17.0	19.0	22.0	18.0	20.0
YEAR	22.0	1.0	13.0									

03557405 HIWASSEE RIVER NEAR BENTON, TN

LOCATION.--Lat 35°12'18", long 84°39'10", Polk County, Hydrologic Unit 06020003, at county road bridge on Patty Road, 1.5 mi (2.4 km) north of Benton, 800 ft (244 m) upstream from Ocoee River, and at mile 34.5 (55.5 km).

DRAINAGE AREA.--1,362 mi² (3,528 km²).

PERIOD OF RECORD.--October 1976 to September 1977.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
FEB												
16...	1000	2600	34	6.7	2.2	9	1	11.2	5	<1.0	--	--
APR												
13...	1010	5060	24	6.8	11.7	9	4	10.9	--	1.0	--	--
MAY												
10...	0945	1730	46	6.7	11.7	10	11	9.7	3	<1.0	2200	<100
JUN												
14...	0955	2910	46	6.8	15.0	5	10	9.5	--	1.0	6200	600
JUL												
12...	1000	--	24	6.9	16.7	8	<1	9.4	--	<1.0	<100	<100
AUG												
16...	0930	--	25	7.0	18.9	3	3	8.7	3	<1.0	400	<10
SEP												
13...	1015	--	25	6.8	17.8	5	2	8.3	--	1.1	2600	100

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)
FEB												
16...	2.0	1.2	1.7	.8	7	6	4.0	2.0	<.1	5.4	40	.05
APR												
13...	--	--	--	--	9	7	--	--	--	--	--	--
MAY												
10...	5.0	1.5	1.7	.6	10	8	6.0	4.0	<.1	--	40	.05
JUN												
14...	--	--	--	--	10	8	--	--	--	--	--	--
JUL												
12...	--	--	--	--	10	8	--	--	--	--	--	--
AUG												
16...	4.0	.8	.8	.9	10	8	<1.0	2.0	<.1	--	30	.04
SEP												
13...	--	--	--	--	10	8	--	--	--	--	--	--

DATE	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL COPPER (CU) (UG/L)
FEB												
16...	281	1	.13	.01	.03	.02	<200	<100	<10	120	<1	<10
APR												
13...	--	--	.20	.03	.07	.02	--	--	--	--	--	--
MAY												
10...	187	4	.45	<.01	.06	.01	500	<100	<10	--	<1	90
JUN												
14...	--	--	.22	.01	.07	.02	--	--	--	--	--	--
JUL												
12...	--	--	.09	.02	.06	.01	--	--	--	--	--	--
AUG												
16...	--	1	.20	.02	.20	.01	<200	<100	<10	--	<1	120
SEP												
13...	--	--	.27	.03	.03	.01	--	--	--	--	--	--

03557405 HIWASSEE RIVER NEAR BENTON, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB											
16...	210	70	<10	<10	20	10	<.2	<50	<10	<10	.8
APR											
13...	540	60	--	--	30	<10	--	--	--	--	--
MAY											
10...	290	200	<10	<10	20	20	<.2	<50	<10	30	1.0
JUN											
14...	350	60	--	--	30	10	--	--	--	--	--
JUL											
12...	70	<50	--	--	<10	<10	--	--	--	--	--
AUG											
16...	120	R140	<10	<10	70	60	.3	<50	<10	130	1.9
SEP											
13...	150	<50	--	--	50	40	--	--	--	--	--

03560500 DAVIS MILL CREEK AT COPPERHILL, TN

LOCATION.--Lat 34°59'43", long 84°22'56", Polk County, Hydrologic Unit 06020203, on right bank 100 ft (30 m) upstream from bridge on State Highway 68, 0.1 mi (0.2 km) upstream from mouth, 0.4 mi (0.6 km) northwest of Louisville and Nashville Railroad station, and 0.8 mi (1.3 km) northwest of Post Office at Copperhill.

DRAINAGE AREA.--5.16 mi^2 (13.36 km^2).

PERIOD OF RECORD.--July 1940 to September 1941 (published as Mill Creek at Copperhill), December 1948 to current year.

REVISED RECORDS.--WSP 1206: Drainage area. WSP 2110: 1949-65(M).

GAGE.--Water-stage recorder and modified V-notch weir and dam. Datum of gage is 1,451.06 ft (442.283 m) above mean sea level. July 16, 1940, to Sept. 30, 1941, water-stage recorder and sharp-crested weir at site 145 ft (40 m) upstream at datum 1.58 ft (0.482 m) higher. Oct. 1, 1941, to Aug. 12, 1971, water-stage recorder and concrete San Dimas flume and dam at present site and datum.

REMARKS.--Records poor. Flow is predominately process water for Cities Service Company plant that is withdrawn from Ocoee River upstream from Davis Mill Creek and discharged to Davis Mill Creek upstream from the gage.

AVERAGE DISCHARGE.--28 years (water years 1941, 1950-77), 55.2 ft^3/s (1.563 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft^3/s (99.7 m^3/s) Oct. 6, 1949, gage height, 6.02 ft (1.835 m) in gage well, 8.5 ft (2.59 m) from floodmarks, from rating curve extended above 150 ft^3/s (4.25 m^3/s) on basis of critical depth measurement of peak flow; minimum daily, 3.1 ft^3/s (0.088 m^3/s) July 30, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft^3/s (47.9 m^3/s) Apr. 4, gage height, 6.46 ft (1.969 m), from crest-stage gage; minimum daily, 15 ft^3/s (0.42 m^3/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	170	120	150	110	113	130	40	57	38	40	124
2	131	160	110	140	110	139	120	36	42	42	38	124
3	137	140	105	130	110	149	250	66	46	34	36	125
4	131	120	105	130	105	215	200	70	51	26	34	125
5	131	120	100	125	105	157	450	50	56	25	32	123
6	138	120	100	120	105	141	300	40	61	24	31	132
7	152	115	180	160	100	137	200	34	38	23	23	154
8	160	115	150	140	100	115	150	50	48	22	22	109
9	150	115	120	130	90	115	120	40	38	21	15	107
10	143	115	115	160	76	110	100	36	42	20	18	106
11	144	110	110	150	81	110	90	34	42	19	22	106
12	140	130	160	140	84	115	85	32	63	18	28	104
13	141	120	140	130	87	260	85	30	74	41	25	110
14	143	115	130	120	121	190	80	29	80	35	21	114
15	150	130	170	140	84	140	80	28	50	47	24	104
16	155	120	150	130	73	120	80	27	27	51	20	129
17	155	120	130	120	84	115	75	26	27	50	100	103
18	155	115	120	120	87	115	75	25	25	48	111	103
19	150	115	110	115	87	110	75	50	35	35	74	105
20	155	115	140	115	84	140	100	40	42	45	72	96
21	155	110	150	110	95	130	90	38	26	45	70	92
22	150	110	130	110	101	170	80	32	34	43	72	86
23	150	110	120	110	95	140	100	55	39	41	70	83
24	150	105	110	130	154	125	110	130	34	29	95	82
25	190	105	105	125	167	120	100	90	46	38	80	92
26	210	105	150	120	192	115	90	50	41	39	101	87
27	170	140	130	120	167	110	85	36	39	27	114	89
28	160	150	120	120	120	110	80	41	41	38	124	95
29	150	200	115	115	---	140	75	48	39	40	121	94
30	160	150	110	115	---	350	70	40	43	60	129	92
31	190	---	140	115	---	250	---	33	---	50	125	---
TOTAL	4723	3765	3945	3955	2974	4566	3725	1376	1326	1114	1887	3195
MEAN	152	126	127	128	106	147	124	44.4	44.2	35.9	60.9	107
MAX	210	200	180	160	192	350	450	130	80	60	129	154
MIN	127	105	100	110	73	110	70	25	25	18	15	82

CAL YR 1976 TOTAL 47292 MEAN 129 MAX 215 MIN 95
WTR YR 1977 TOTAL 36551 MEAN 100 MAX 450 MIN 15

NOTE.--No gage-height record Oct. 17 to Feb. 9, Mar. 8 to May 26.

03562551 OCOEE RIVER AT OCOEE NO. 3 POWERHOUSE, NEAR DUCKTOWN, TN

LOCATION.--Lat 35°14'37", long 84°28'59", Polk County, Hydrologic Unit 06020003, at Ocoee No. 3 powerhouse, at mouth of Little Limestone Creek, 6.1 mi (9.8 km) northwest of Ducktown, and at mile 29.3 (47.1 km).

DRAINAGE AREA.--492 mi^2 (1,274 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by Blue Ridge Lake (see Water Resources Data for Georgia, 1977) and Ocoee No. 3 Lake (station 03562500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
18...	1110	1270	100	5.0	15.0	6	2	7.1	5	--	--
NOV											
03...	1145	1320	86	6.8	12.8	8	4	9.0	4	--	320
DEC											
13...	0900	885	260	6.4	9.0	1	3	6.6	<1	--	--
JAN											
17...	1000	1320	140	6.4	1.5	2	7	10.0	3	--	--
FEB											
16...	1210	1260	130	6.2	4.4	6	4	11.4	--	--	--
MAR											
09...	0900	1080	170	5.3	10.0	7	4	8.0	2	--	--
APR											
18...	0930	1315	41	6.6	13.0	10	17	8.7	4	--	--
MAY											
05...	1200	1315	48	7.2	14.5	10	13	9.4	5	<1.0	1380
JUN											
13...	1115	1088	47	6.6	20.0	4	9	7.1	1	--	--
JUL											
18...	1015	1315	47	6.6	20.0	11	4	7.1	--	--	--
AUG											
24...	1035	1315	71	7.1	21.0	12	17	7.0	4	1.5	1800

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT											
18...	--	12	1.2	2.8	1.0	6	5	44	7.0	<.1	7.8
NOV											
03...	50	14	1.1	1.9	--	12	10	30	4.0	--	6.8
DEC											
13...	--	38	2.5	5.4	1.5	10	8	99	14	<.1	6.9
JAN											
17...	--	18	1.4	2.7	1.0	6	5	52	8.0	<.1	6.1
FEB											
16...	--	19	1.8	--	--	7	6	49	6.0	--	--
MAR											
09...	--	--	--	--	--	2	2	--	--	--	--
APR											
18...	--	--	--	--	--	7	6	--	--	--	--
MAY											
05...	160	4.0	.9	1.4	.7	5	4	15	3.0	<.1	--
JUN											
13...	--	--	--	--	--	7	6	--	--	--	--
JUL											
18...	--	--	--	--	--	7	6	--	--	--	--
AUG											
24...	600	5.3	1.0	2.1	1.0	5	4	19	3.0	<.1	--

03562551 OCOEE RIVER AT OCOEE NO. 3 POWERHOUSE, NEAR DUCKTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)
OCT											
18...	70	.10	240	7	.05	.05	.05	.01	--	--	--
NOV											
03...	60	.08	214	4	.06	.03	.07	.02	.02	--	--
DEC											
13...	180	.24	430	2	.13	.13	<.01	.01	--	--	--
JAN											
17...	100	.14	356	5	.12	.04	.02	<.01	--	--	--
FEB											
16...	110	.15	374	2	--	--	--	--	--	--	<2
MAR											
09...	--	--	--	--	.18	.06	.02	.01	--	--	--
APR											
18...	--	--	--	--	.11	.03	.01	.01	--	--	--
MAY											
05...	30	.04	107	8	.12	.01	.09	.02	--	600	<2
JUN											
13...	--	--	--	--	.11	.02	.04	.01	--	--	--
JUL											
18...	--	--	--	--	.11	.03	.03	.01	--	--	--
AUG											
24...	50	.07	178	6	.08	.04	.07	.01	--	<200	<2

DATE	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)
OCT										
18...	--	--	--	--	--	--	670	--	--	--
NOV										
03...	--	--	--	<1	--	160	730	70	<10	--
DEC										
13...	--	--	--	--	--	--	810	--	--	--
JAN										
17...	--	--	--	--	--	--	530	--	--	--
FEB										
16...	--	--	--	<1	<5	70	940	<50	15	--
MAR										
09...	--	--	--	--	--	--	920	--	--	--
APR										
18...	--	--	--	--	--	--	970	--	--	--
MAY										
05...	<100	<10	70	4	<5	30	970	50	21	<10
JUN										
13...	--	--	--	--	--	--	690	--	--	--
JUL										
18...	--	--	--	--	--	--	530	--	--	--
AUG										
24...	<100	<10	80	<1	<5	30	770	130	<10	<10

03562551 OCOEE RIVER AT OCOEE NO. 3 POWERHOUSE, NEAR DUCKTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	CYANIDE (CN) (MG/L)
OCT										
18...	120	--	--	--	--	--	--	--	--	--
NOV										
03...	100	90	<.2	--	1	--	--	330	--	<.01
DEC										
13...	370	--	--	--	--	--	--	--	--	--
JAN										
17...	190	--	--	--	--	--	--	--	--	--
FEB										
16...	110	30	<.2	--	<1	--	--	180	--	--
MAR										
09...	220	--	--	--	--	--	--	--	--	--
APR										
18...	70	--	--	--	--	--	--	--	--	--
MAY										
05...	100	90	<.2	<50	<1	<10	<1000	80	.9	<.01
JUN										
13...	150	--	--	--	--	--	--	--	--	--
JUL										
18...	130	--	--	--	--	--	--	--	--	--
AUG										
24...	210	200	<.2	<50	<1	<10	<1000	140	1.0	<.01

03563000 OCOEE RIVER AT EMF, TN

LOCATION.--Lat 35°05'48", long 84°32'07", Polk County, Hydrologic Unit 06020203, on left bank 700 ft (210 m) downstream from Tennessee Valley Authority powerplant, 0.8 mi (1.3 km) upstream from former village of Emf, 2.0 mi (3.2 km) downstream from Goforth Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.--524 mi^2 (1,357 km^2).

PERIOD OF RECORD.--October 1912 to current year. Prior to January 1913, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1913-34. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 837.88 ft (255.386 m) above mean sea level.

REMARKS.--Records good. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1977), Ocoee No. 3 Lake (station 03562500), and by powerplant above station. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--65 years, 1,250 ft^3/s (35.40 m^3/s), 32.40 in/yr (823 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s (833 m^3/s) July 10, 1916, gage height, 13.7 ft (4.18 m), from rating curve extended above 17,000 ft^3/s (481 m^3/s); minimum, 3.4 ft^3/s (0.096 m^3/s) Sept. 20, 1962, gage height, 2.12 ft (0.646 m); minimum daily, 4.6 ft^3/s (0.13 m^3/s) Sept. 14, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 62,000 ft^3/s (1,760 m^3/s) was the greatest known since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,500 ft^3/s (326 m^3/s) Apr. 5, gage height, 9.28 ft (2.829 m); minimum, 18 ft^3/s (0.51 m^3/s) several times in July and August, gage height, 2.37 ft (0.722 m); minimum daily, 74 ft^3/s (2.10 m^3/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	1460	699	1160	1150	667	1510	1450	1410	969	699	889
2	1400	1500	707	1280	1210	863	1460	1420	1160	1090	723	889
3	1440	1470	805	1170	829	880	3890	1630	1120	1050	987	880
4	1450	1460	530	1120	855	509	3860	1980	1150	978	755	880
5	1420	1450	470	1050	1150	667	8050	1760	1150	987	852	889
6	1320	1470	1480	960	1050	1210	4280	1700	1220	978	1050	889
7	1330	1470	850	1430	1300	1050	3670	1460	1010	987	74	1620
8	1460	1460	1450	1230	1440	739	3460	1440	1360	978	637	1810
9	1470	1450	550	1480	829	731	3370	1470	1200	1020	1120	1030
10	1450	1450	350	2100	951	772	3140	1280	1170	987	898	906
11	1250	1470	500	1710	942	1190	3090	1230	898	987	1460	951
12	1470	1430	500	1530	978	1650	2890	1130	1020	898	889	1120
13	1450	1430	700	1410	951	3710	2940	1170	906	1100	788	906
14	1410	1440	900	996	1140	1800	2940	1120	1220	987	175	969
15	1340	1370	1100	1150	1240	1290	2850	1190	1160	987	838	906
16	1450	366	800	1100	1370	772	2800	1460	898	996	1050	1260
17	1460	490	780	1380	1040	731	2790	1460	906	978	906	1300
18	1410	503	747	1480	691	813	1750	1470	898	987	1870	1050
19	1500	516	739	1470	699	838	1460	1460	1070	978	969	1030
20	1440	331	1250	1440	476	1150	1140	1370	1030	996	699	1190
21	1430	304	1390	1050	1120	1160	1340	1380	1290	933	846	1070
22	1410	644	1030	1030	987	1140	1460	1460	1030	821	924	1060
23	1460	432	1010	978	821	1140	1480	1440	969	1060	915	1060
24	1450	360	772	1050	1460	1060	1480	1340	987	821	924	1060
25	1470	366	924	1040	846	1080	1860	1440	996	863	1010	1050
26	1510	395	1010	1040	731	1070	1470	1460	1060	1270	889	1100
27	1340	175	1200	1080	915	1090	2190	1820	1170	629	889	1090
28	1370	715	863	1300	978	1060	2380	1180	1010	414	898	960
29	1440	1350	700	1460	---	1240	2260	1170	1060	829	855	1160
30	1470	1250	800	1460	---	5850	1900	1340	996	915	889	1070
31	1480	---	1330	1450	---	3190	---	1420	---	707	855	---
TOTAL	43880	29977	26936	39584	28149	41112	79160	44100	32524	29180	27333	32044
MEAN	1415	999	869	1277	1005	1326	2639	1423	1084	941	882	1068
MAX	1510	1500	1480	2100	1460	5850	8050	1980	1410	1270	1870	1810
MIN	1130	175	350	960	476	509	1140	1120	898	414	74	880
(†)	-21100	-7700	+13500	-500	-100	+37300	+13500	-2400	-4600	-9600	-7700	-5000
MEAN‡	735	743	1304	1261	1002	2529	3089	1345	931	632	633	901
CFSM‡	1.40	1.42	2.49	2.41	1.91	4.83	5.90	2.57	1.78	1.21	1.21	1.72
IN.‡	1.62	1.58	2.87	2.77	1.99	5.57	6.58	2.96	1.98	1.39	1.39	1.92

CAL YR 1976 TOTAL 529739 MEAN 1447 MAX 6590 MIN 175 MEAN‡ 1419 CFSM‡ 2.71 IN.‡ 36.87
WTR YR 1977 TOTAL 453979 MEAN 1244 MAX 8050 MIN 74 MEAN‡ 1259 CFSM‡ 2.40 IN.‡ 32.62

† Change in contents, in cfs-days, in Blue Ridge Lake (Georgia), furnished by Tennessee Valley Authority.
‡ Adjusted for change in contents in lakes or reservoirs listed above.

03564500 OCOEE RIVER AT PARKSVILLE, TN

LOCATION.--Lat 35°05'48", long 84°39'15", Polk County, Hydrologic Unit 06020203, on right bank 0.4 mi (0.6 km) downstream from Lake Ocoee Dam and Ocoee No. 1 powerplant of Tennessee Valley Authority at Parksville, and at mile 11.5 (18.5 km).

DRAINAGE AREA.--595 mi^2 (1,541 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1911 to September 1916, March 1921 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1916, 1921-36 (adjusted runoff). WSP 1386: 1926.

GAGE.--Water-stage recorder. Datum of gage is 716.96 ft (218.529 m) above mean sea level.

REMARKS.--Water-discharge records fair. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1977), Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

AVERAGE DISCHARGE.--61 years, 1,335 ft^3/s (37.81 m^3/s), 30.47 in/yr (774 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft^3/s (615 m^3/s), Mar. 29, 1951, gage height, 20.22 ft (6.163 m); minimum daily, 10 ft^3/s (0.28 m^3/s) Oct. 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 65,000 ft^3/s (1,840 m^3/s) was the greatest known flood since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft^3/s (368 m^3/s) Apr. 5, gage height, 14.04 ft (4.279 m); minimum, 49 ft^3/s (1.39 m^3/s) May 18, gage height, 2.73 ft (0.832 m); minimum daily, 124 ft^3/s (3.51 m^3/s) Aug. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	1540	1380	1590	1260	849	2570	971	1200	1400	885	860
2	1260	1240	1520	717	1030	1390	2630	1530	1260	1460	718	800
3	1030	1540	1460	991	966	777	3270	1620	1250	146	739	800
4	1030	1600	387	1040	962	757	4080	2190	1240	831	724	780
5	1420	1680	384	1020	863	905	11200	2130	1160	1000	711	800
6	2050	1640	797	982	790	1370	6840	1540	1210	1130	551	820
7	1620	1680	974	1240	804	1510	4230	1520	1100	1010	549	1800
8	1430	1800	706	1850	1360	928	2870	1530	1210	1140	715	2300
9	1320	1600	1180	1970	618	877	4680	1590	1120	1040	933	1360
10	1280	1520	1180	1870	998	894	4770	2110	1060	1050	948	840
11	1440	1560	1190	2060	1280	914	3920	2260	801	991	851	860
12	1360	1780	948	2670	971	1050	3610	2290	758	999	1420	940
13	1430	1760	977	2180	1040	2740	3050	1880	848	956	1010	960
14	1330	1800	719	698	1040	2680	2650	1300	1030	1010	124	860
15	1300	1720	931	1610	1180	2730	2620	1300	1350	950	847	1000
16	1330	460	1190	1700	1310	2720	2630	535	1450	1020	882	1140
17	1360	580	1430	1700	1500	1150	2640	487	815	936	832	1400
18	1370	530	1100	1710	1070	1010	2650	484	958	1020	1320	1560
19	1600	520	1040	1720	675	824	2660	763	974	952	1570	1280
20	1380	520	1000	1730	755	513	2230	1390	993	881	895	1300
21	1350	138	1120	921	866	961	1860	1410	937	971	865	1140
22	1420	680	1270	1050	1080	1380	1800	1610	1320	759	869	1140
23	1520	640	1650	1010	701	1320	1540	1610	1260	787	821	1140
24	1450	700	1680	964	879	1280	1550	1130	1190	786	891	1080
25	1600	400	768	1020	1570	1220	1120	1470	1010	821	830	1060
26	1730	420	1040	1020	1250	1080	2010	1470	1000	901	941	1040
27	1690	460	973	1020	1100	1090	1570	1460	1030	1160	838	1040
28	1640	700	731	1100	1130	1100	1660	2060	1040	1040	780	1060
29	1360	1560	966	1500	---	1140	2030	1400	1040	835	760	1180
30	1380	1660	972	1510	---	2800	1420	1400	1130	762	820	1360
31	1400	---	696	1510	---	3510	---	1370	---	899	820	---
TOTAL	43960	34428	32379	43673	29048	43469	92360	45810	32744	29643	26459	33700
MEAN	1418	1148	1044	1409	1037	1402	3079	1478	1091	956	854	1123
MAX	2050	1800	1680	2670	1570	3510	11200	2290	1450	1460	1570	2300
MIN	1030	138	384	698	618	513	1120	484	758	146	124	780

CAL YR 1976 TOTAL 573903 MEAN 1568 MAX 6270 MIN 138 MEAN‡ 1542 CFSM‡ 2.59 IN.‡ 35.28
WTR YR 1977 TOTAL 487673 MEAN 1336 MAX 11200 MIN 124 MEAN‡ 1354 CFSM‡ 2.28 IN.‡ 30.88

‡ Adjusted for change in contents in Blue Ridge Lake (Georgia) and Lake Ocoee.

NOTE.--No gage-height record Oct. 29 to Dec. 3, Aug. 28 to Sept. 30.

03564500 OCOEE RIVER AT PARKSVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-72, 1976 to current year.

REMARKS.--Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1977), Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
05...	1235	2020	120	--	21.0	--	--	--	--	--	--
18...	1250	2550	110	5.5	18.0	2	1	8.2	5	--	--
NOV											
03...	1040	2550	120	7.0	13.3	5	2	9.2	2	<1.0	40
03...	1045	2550	120	6.8	13.3	5	3	9.4	2	<1.0	40
DEC											
13...	1110	2650	140	7.0	8.0	2	29	8.4	1	--	--
JAN											
17...	1450	1700	130	6.8	4.0	6	30	9.8	2	--	--
FEB											
16...	1115	1790	120	5.9	3.9	8	6	12.4	--	--	--
MAR											
31...	1200	2710	145	--	14.0	--	--	--	--	--	--
APR											
18...	1500	2650	64	6.6	14.5	10	20	9.0	<1	--	--
MAY											
05...	1103	2350	62	7.2	16.0	5	7	9.6	2	<1.0	160
JUN											
07...	1520	2060	56	6.9	20.5	11	10	8.0	1	--	--
AUG											
24...	0955	50	69	7.5	24.0	3	3	7.1	2	1.4	500

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT											
05...	--	--	--	--	--	--	--	--	--	--	--
18...	--	15	1.4	2.8	1.0	16	13	39	6.0	<.1	7.5
NOV											
03...	<10	17	1.4	3.3	1.0	10	8	36	6.0	--	6.8
03...	<10	17	1.0	3.2	.9	11	9	40	6.0	--	6.8
DEC											
13...	--	18	1.7	3.6	.9	18	15	35	7.0	<.1	6.5
JAN											
17...	--	18	1.6	2.5	1.3	17	14	48	7.0	<.1	5.6
FEB											
16...	--	16	1.5	--	--	2	2	180	7.0	--	--
MAR											
31...	--	--	--	--	--	--	--	--	--	--	--
APR											
18...	--	--	--	--	--	7	6	--	--	--	--
MAY											
05...	10	6.0	1.0	1.7	.7	6	5	20	4.0	<.1	--
JUN											
07...	--	--	--	--	--	7	6	--	--	--	--
AUG											
24...	100	6.5	1.2	2.7	.9	12	10	17	4.0	<.1	--

03564500 OCOEE RIVER AT PARKSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
18...	80	.11	551	41	.09	.02	.06	<.01	--	--
NOV										
03...	80	.11	551	<1	.09	.02	.07	.01	<.01	300
03...	80	.11	551	<1	.10	.48	.23	.01	.04	300
DEC										
13...	50	.07	358	7	.09	.18	.10	.04	--	--
JAN										
17...	80	.11	367	13	.10	.18	.02	.02	--	--
FEB										
16...	180	.24	870	2	--	--	--	--	--	--
MAR										
31...	--	--	--	--	--	--	--	--	--	--
APR										
18...	--	--	--	--	.11	.03	.03	.01	--	--
MAY										
05...	50	.07	317	3	.11	<.01	.06	.01	--	700
JUN										
07...	--	--	--	--	.11	.01	.04	.01	--	--
AUG										
24...	60	.08	8.10	2	.19	.04	.01	<.01	--	<200

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	240	--	--
NOV										
03...	<2	<100	<10	<10	3	<5	1200	330	<50	<10
03...	<2	<100	<10	20	3	<5	30	350	<50	<10
DEC										
13...	--	--	--	--	--	--	--	2900	--	--
JAN										
17...	--	--	--	--	--	--	--	1800	--	--
FEB										
16...	5	<100	--	--	<1	<5	30	1300	<50	26
MAR										
31...	--	--	--	--	--	--	--	--	--	--
APR										
18...	--	--	--	--	--	--	--	620	--	--
MAY										
05...	<2	<100	<10	60	1	<5	80	500	<50	<10
JUN										
07...	--	--	--	--	--	--	--	500	--	--
AUG										
24...	<2	<100	<10	60	<1	<5	<10	240	110	<10

03564500 OCOEE RIVER AT PARKSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
18...	--	90	--	--	--	--	--	--	--	--
NOV										
03...	<10	110	90	<.2	60	1	<10	<1000	680	.9
03...	<10	130	80	.2	<50	1	10	<1000	240	1.9
DEC										
13...	--	180	--	--	--	--	--	--	--	--
JAN										
17...	--	120	--	--	--	--	--	--	--	--
FEB										
16...	--	150	150	<.2	--	2	--	--	200	--
MAR										
31...	--	--	--	--	--	--	--	--	--	--
APR										
18...	--	90	--	--	--	--	--	--	--	--
MAY										
05...	<10	90	60	<.2	<50	3	<10	<1000	80	2.9
JUN										
07...	--	70	--	--	--	--	--	--	--	--
AUG										
24...	<10	200	80	<.2	140	<1	<10	<1000	140	1.0

03565300 SOUTH CHESTUEE CREEK NEAR BENTON, TN

LOCATION.--Lat 35°10'02", long 84°42'59", Bradley County, Hydrologic Unit 06020002, on right bank 50 ft (15 m) downstream from county highway bridge, 0.2 mi (0.3 km) downstream from Climer Branch, 2.4 mi (3.9 km) southwest of Benton Station, 2.8 mi (4.5 km) north of Ocoee, 3.6 mi (5.8 km) west of Benton, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--31.8 mi^2 (82.4 km^2).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 712.14 ft (217.060 m) above mean sea level.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--20 years, 53.1 ft^3/s (1.504 m^3/s), 22.68 in/yr (576 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft^3/s (340 m^3/s) Mar. 16, 1973, gage height, 12.11 ft (3.691 m), from rating curve extended above 3,200 ft^3/s (90.6 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 2.1 ft^3/s (0.059 m^3/s) Aug. 31, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 10	0145	824	23.3	6.99	2.131	Apr. 5	0215	2170	61.5	8.23	2.509
Mar. 13	0100	*2420	68.5	8.38	2.554	Sept. 7	2400	2010	56.9	8.13	2.478
Mar. 30	0330	1330	37.7	7.62	2.323						

Minimum discharge, 3.5 ft^3/s (0.099 m^3/s) Aug. 23, 24, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	7.7	17	57	20	59	128	17	12	11	4.8	3.8
2	4.2	6.3	14	56	19	44	101	17	11	9.7	4.6	5.0
3	4.0	5.9	12	47	18	39	651	21	11	8.2	5.0	4.0
4	4.0	5.7	11	31	17	65	576	17	10	7.8	4.2	3.7
5	3.8	5.5	9.6	38	16	53	1080	15	9.7	7.4	5.0	3.8
6	4.2	5.3	20	61	15	246	202	14	9.8	7.4	4.4	3.8
7	4.7	5.2	101	143	14	128	128	14	12	7.2	4.2	491
8	6.4	5.1	41	66	14	78	99	23	11	6.9	4.4	622
9	11	5.1	24	262	13	59	81	14	10	6.7	6.4	32
10	6.2	5.2	19	372	13	48	70	13	10	6.6	4.8	20
11	5.0	5.4	18	96	12	41	60	12	9.9	6.4	4.4	20
12	4.7	6.5	66	93	16	440	50	11	9.9	8.8	3.8	13
13	4.5	6.0	52	73	23	1020	44	10	9.5	8.1	3.8	13
14	4.5	5.8	30	85	17	184	40	10	19	6.6	4.0	33
15	4.4	8.3	137	90	16	125	36	9.8	13	6.4	4.2	53
16	4.5	8.0	65	59	14	96	32	9.5	25	6.5	6.4	194
17	4.5	7.6	40	49	13	77	29	9.4	27	6.4	4.6	229
18	4.3	6.5	29	44	13	70	27	9.2	18	6.3	12	61
19	4.4	6.1	24	39	13	58	27	9.4	18	6.3	6.0	45
20	5.3	6.1	118	35	13	63	25	8.6	20	5.9	4.4	42
21	5.5	6.0	74	32	12	50	23	18	20	9.9	4.0	27
22	4.7	5.7	41	30	12	55	25	27	13	18	4.2	21
23	4.8	5.4	33	27	12	44	42	60	13	6.0	3.7	17
24	5.3	5.4	27	25	288	39	31	45	12	5.0	3.8	15
25	13	5.4	35	24	89	36	24	32	10	5.2	3.8	18
26	12	6.1	95	24	54	32	21	22	18	30	4.0	150
27	6.4	15	51	31	128	30	19	21	23	6.4	4.2	115
28	5.2	93	39	28	86	34	18	18	12	5.2	4.2	78
29	4.9	97	31	24	---	193	17	16	9.9	5.2	4.2	49
30	6.4	26	26	23	---	988	16	14	9.7	5.8	4.2	52
31	12	---	95	22	---	242	---	13	---	5.2	3.8	---
TOTAL	179.6	388.3	1394.6	2086	990	4736	3722	549.9	416.4	248.5	145.5	2434.1
MEAN	5.79	12.9	45.0	67.3	35.4	153	124	17.7	13.9	8.02	4.69	81.1
MAX	13	97	137	372	288	1020	1080	60	27	30	12	622
MIN	3.8	5.1	9.6	22	12	30	16	8.6	9.5	5.0	3.7	3.7
CFSM	.18	.41	1.42	2.12	1.11	4.81	3.90	.56	.44	.25	.15	2.55
IN.	.21	.45	1.63	2.44	1.16	5.54	4.35	.64	.49	.29	.17	2.85

CAL YR 1976 TOTAL 13475.3 MEAN 36.8 MAX 762 MIN 3.5 CFSM 1.16 IN 15.76
WTR YR 1977 TOTAL 17290.9 MEAN 47.4 MAX 1080 MIN 3.7 CFSM 1.49 IN 20.23

03565414 HIWASSEE RIVER NEAR CHARLESTON, TN

LOCATION.--Lat 35°16'27", long 84°45'11", Bradley County, Hydrologic Unit 06020002, 0.4 mi (0.6 km) southeast of Charleston, 1.1 mi (1.8 km) south of Calhoun, 5.8 mi (9.3 km) east of Eureka, and at mile 22.9 (36.8 km).

DRAINAGE AREA.--2,223 mi^2 (5,758 km^2).

PERIOD OF RECORD.--October 1976 to September 1977.

REMARKS.--Site located in Chickamauga Lake (station 03566500).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)
APR										
20...	0825	5930	66	7.1	15.1	8	11	9.8	4	1.5
MAY										
18...	1115	3510	58	5.8	14.0	5	4	10.3	--	1.0
JUL										
13...	0915	--	47	--	21.0	9	2	8.5	3	1.6
SEP										
20...	0840	--	84	7.6	21.5	5	11	7.7	5	1.8

DATE	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
APR										
20...	1320	200	8.0	1.0	1.6	.6	15	12	12	2.0
MAY										
18...	1440	100	--	--	--	--	21	17	--	--
JUL										
13...	4000	100	5.0	1.4	1.9	.9	--	--	8.0	3.0
SEP										
20...	2500	500	23	3.1	2.0	1.2	29	24	12	3.0

DATE	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)
APR										
20...	<.1	50	.07	801	7	.19	.03	.19	.02	<200
MAY										
18...	--	--	--	--	--	.19	<.01	.04	.03	--
JUL										
13...	<.1	40	.05	--	17	.18	.01	.02	.01	<200
SEP										
20...	<.1	50	.07	--	11	.21	<.01	.08	.02	<200

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
APR										
20...	<2	<100	<10	170	1	<5	40	790	<50	<10
MAY										
18...	--	--	--	--	--	--	--	500	100	--
JUL										
13...	<2	<100	<10	110	<1	<5	40	590	270	<10
SEP										
20...	<2	<100	<10	<10	<1	<5	20	410	<50	<10

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR									
20...	<10	60	20	<.2	<50	<1	<10	50	--
MAY									
18...	--	600	10	--	--	--	--	--	--
JUL									
13...	<10	30	<10	<.2	<50	<1	<10	20	1.1
SEP									
20...	<10	70	30	<.2	<50	<2	<10	80	.5

03565500 OOSTANAULA CREEK NEAR SANFORD, TN

LOCATION.--Lat 35°19'39", long 84°42'19", McMinn County, Hydrologic Unit 06020002, on right bank 20 ft (6 m) downstream from highway bridge, 1.3 mi (2.1 km) southeast of Sanford, 3.5 mi (5.6 km) northeast of Calhoun, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--57.0 mi^2 (147.6 km^2).

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 716.51 ft (218.392 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--23 years, 95.8 ft^3/s (2.713 m^3/s), 22.82 in/yr (580 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft^3/s (227 m^3/s) Mar. 16, 1973, gage height, 13.43 ft (4.093 m); minimum, 16 ft^3/s (0.45 m^3/s) Oct. 13-28, 1954, Sept. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	1915	1040	29.5	6.37	1.942	Sept. 8	0545	733	20.8	5.21	1.588
Mar. 31	1015	883	25.0	5.73	1.747	Sept. 16	0700	823	23.3	5.49	1.673
Apr. 5	1900	*1560	44.2	8.00	2.438						

Minimum discharge, 22.0 ft^3/s (0.62 m^3/s) Aug. 29, gage height, 2.22 ft (0.677 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	62	74	95	66	104	379	76	42	40	33	25
2	28	47	62	76	62	94	228	74	41	43	32	25
3	27	39	57	72	60	86	360	75	40	42	32	25
4	27	38	53	70	56	82	637	75	39	39	31	24
5	28	36	49	68	54	85	1420	72	38	39	32	25
6	26	35	53	85	52	118	1040	68	38	37	33	28
7	30	33	120	150	50	131	487	66	39	36	29	162
8	33	33	109	118	50	107	308	69	39	33	29	628
9	37	34	75	131	50	98	252	66	37	29	36	185
10	45	31	65	249	48	92	220	62	36	29	33	64
11	35	30	61	156	49	87	198	60	36	38	31	181
12	31	31	73	125	50	168	177	59	36	33	28	159
13	28	31	90	109	57	879	164	57	36	33	28	66
14	27	30	73	107	55	691	153	53	82	32	26	72
15	27	32	106	120	52	252	142	45	57	31	29	344
16	27	33	126	104	49	199	133	53	43	31	29	576
17	26	30	91	96	48	170	124	50	41	29	30	233
18	27	29	79	85	47	152	118	51	40	30	47	149
19	28	29	73	81	47	140	112	50	42	31	42	162
20	27	29	80	77	46	137	109	54	44	31	34	229
21	31	28	95	75	47	133	102	49	46	29	36	118
22	29	29	77	71	45	119	100	52	48	31	29	97
23	27	29	70	69	49	113	110	68	50	61	28	85
24	28	27	68	70	104	104	106	56	53	43	29	77
25	46	27	66	68	98	98	95	50	43	38	39	74
26	78	27	91	65	75	93	88	49	55	57	31	81
27	54	33	90	160	121	90	85	48	69	41	26	88
28	40	107	77	130	139	89	83	47	47	34	26	86
29	35	272	71	100	---	102	80	45	43	33	26	73
30	37	124	67	80	---	388	76	44	41	36	27	68
31	65	---	90	70	---	795	---	44	---	33	27	---
TOTAL	1063	1395	2431	3132	1726	5996	7686	1787	1341	1122	968	4209
MEAN	34.3	46.5	78.4	101	61.6	193	256	57.6	44.7	36.2	31.2	140
MAX	78	272	126	249	139	879	1420	76	82	61	47	628
MIN	26	27	49	65	45	82	76	44	36	29	26	24
CFSM	.60	.82	1.38	1.77	1.08	3.39	4.49	1.01	.78	.64	.55	2.46
IN.	.69	.91	1.59	2.04	1.13	3.91	5.02	1.17	.88	.73	.63	2.75

CAL YR 1976 TOTAL 30844 MEAN 84.3 MAX 831 MIN 23 CFSM 1.48 IN 20.13
WTR YR 1977 TOTAL 32856 MEAN 90.0 MAX 1420 MIN 24 CFSM 1.58 IN 21.44

03566000 HIWASSEE RIVER AT CHARLESTON, TN

LOCATION.--Lat 35°17'16", long 84°45'07", Bradley County, Hydrologic Unit 06020002, at Hiwassee Packing Plant, on left bank 250 ft (80 m) upstream from Southern Railway bridge, 0.3 mi (0.5 km) upstream from bridge on U. S. Highway 11 at Charleston, and at mile 18.9 (30.4 km).

DRAINAGE AREA.--2,298 mi^2 (5,952 km^2).

PERIOD OF RECORD.--November 1898 to April 1899, November 1899 to April 1903, October 1919 to January 1940, January 1963 to January 1977 (destroyed by vandals). Gage-height records collected at this station during the period December 1884 to December 1889 are contained in United States War Department Stages of Ohio River and Principal Tributaries, 1858-89, Part 1, and during period January 1890 to December 1943 in reports of the U. S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1436: 1902, 1922(M), 1928, 1936(M).

GAGE.--Water-stage recorder and deflection recorder. Datum of gage is 665.56 ft (202.863 m) above mean sea level. Prior to July 18, 1925, nonrecording gages, and July 18, 1925, to Sept. 6, 1926, water-stage recorder, at Southern Railway bridge, 250 ft (80 m) downstream at datum 1.50 ft (0.457 m) higher. Auxiliary nonrecording gages at several sites and datum used periodically.

REMARKS.--Records good. Some diversions above gage for industrial and municipal water supplies. Flow regulated by seven reservoirs (stations 03562500, 03564000, and Water Resources Data for Georgia and North Carolina, 1977). Daily discharge figures computed using areas as determined from a stage-area curve and velocity as determined by a deflection-velocity curve. No deflection meter record February to July 1977. It is anticipated that discharge records for August and September 1977 will be published in WDR TN 78-1. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--35 years (water years 1901-02, 1920-39, 1964-76), 4,841 ft^3/s (137.1 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,000 ft^3/s (1,610 m^3/s) Mar. 17, 1973, gage height, 29.39 ft (8.958 m); minimum daily, 275 ft^3/s (7.79 m^3/s) Sept. 8, 1925; since 1963, reverse flow has occurred for short periods due to backwater from Chickamauga Dam on Tennessee River.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 31, 1886, reached a stage of 34.0 ft (10.36 m), present datum, discharge about 70,000 ft^3/s (1,980 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1976 to January 1977, 10,300 ft^3/s (292 m^3/s) Jan. 11; maximum gage height, 15.80 ft (4.816 m) Oct. 1; minimum daily discharge, 2,010 ft^3/s (56.9 m^3/s) Nov. 20; minimum gage height, 10.00 ft (3.048 m) Jan. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1976 TO JANUARY 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			4300	4720	5650	5230						
2			3880	4680	5200	5370						
3			3890	4290	5000	4410						
4			3820	4770	3900	4580						
5			4100	4400	4000	4640						
6			4630	4580	4500	4590						
7			4570	4580	4740	5780						
8			4200	4750	5410	6050						
9			4390	4970	4280	6570						
10			4280	4330	4410	8940						
11			4240	4780	4480	7950						
12			4240	4820	4620	8010						
13			4350	4930	5020	7220						
14			4070	4930	4720	5420						
15			4200	4920	4870	6230						
16			3990	4310	5850	6290						
17			3960	3630	5330	5950						
18			4290	3660	4990	5740						
19			4300	2190	4580	5710						
20			4040	2010	5050	5630						
21			4070	2080	7760	5190						
22			4180	3690	6090	4820						
23			4390	3730	5500	4880						
24			4420	3590	5840	4840						
25			4580	3660	5270	4870						
26			4730	3320	5440	4910						
27			4830	3750	5880	4850						
28			4570	4210	5380	5130						
29			4580	6880	4910	5300						
30			4320	6390	4950	5300						
31			4500	---	5280	5200						
TOTAL			132910	127550	158900	175600						
MEAN			4287	4252	5126	5665						
MAX			4830	6880	7760	8940						
MIN			3820	2010	3900	4410						

CAL YR 1976 TOTAL 1722280 MEAN 4706 MAX 12000 MIN 2010

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN

LOCATION.--Lat 35°13'15", long 85°05'12", Hamilton County, Hydrologic Unit 06020001, on right bank, 2.9 mi (4.7 km) southeast of Shady Grove, 4.8 mi (7.7 km) east of the Soddy-Daisy city boundary, and at mile 484.5 (779.6 km).

DRAINAGE AREA.--20,630 mi (53,432 km^2).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Site is located in Chickamauga Lake. Flow regulated by many reservoirs above site (see p. 390).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SAMPLING DEPTH (FT)	CROSS SECTION LOCATION (% FROM R BANK)	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	OXYGEN DEMAND CHEM 0.025N DICHROMATE (MG/L)
NOV											
03...	0913	1.0	40	37450	170	7.4	13.4	--	--	8.9	--
03...	0914	3.0	40	--	160	7.4	13.5	--	--	8.8	--
03...	0915	5.0	40	--	160	7.4	13.4	--	--	8.8	--
03...	0916	10	40	--	160	7.4	13.4	--	--	8.8	--
03...	0917	16	40	--	160	7.3	13.4	--	--	8.8	--
03...	0918	26	40	--	150	7.3	13.1	--	--	8.8	--
03...	0923	1.0	66	--	160	7.3	13.2	--	--	8.8	--
03...	0925	3.0	66	--	150	7.3	13.2	9	4	8.8	4
03...	0927	5.0	66	--	150	7.3	13.2	--	--	8.8	--
03...	0929	10	66	--	150	7.3	13.2	--	--	8.7	--
03...	0931	16	66	--	150	7.3	13.1	--	--	8.7	--
03...	0933	23	66	--	150	7.2	13.0	--	--	8.7	--
03...	0935	30	66	--	140	7.2	13.0	--	--	8.8	--
03...	0937	39	66	--	140	7.0	12.7	7	4	8.7	5
FEB											
08...	1115	1.0	40	--	170	7.8	2.5	--	--	13.6	--
08...	1117	3.0	40	--	170	7.8	2.5	--	--	13.6	--
08...	1119	5.0	40	--	170	7.8	2.5	--	--	13.6	--
08...	1121	10	40	--	170	7.7	2.5	--	--	13.6	--
08...	1123	13	40	--	170	7.7	2.5	--	--	13.6	--
08...	1130	1.0	66	--	170	7.8	2.5	--	--	13.4	--
08...	1132	3.0	66	--	170	7.3	2.5	12	5	13.4	7
08...	1134	5.0	66	--	180	7.7	2.5	--	--	13.4	--
08...	1136	10	66	--	180	7.7	2.5	--	--	13.4	--
08...	1138	16	66	--	180	7.7	2.5	--	--	13.4	--
08...	1140	23	66	--	180	7.7	2.5	--	--	13.4	--
08...	1142	30	66	--	180	7.7	2.5	--	--	13.4	--
08...	1144	39	66	--	180	7.3	2.5	15	7	13.4	6
MAY											
04...	1405	1.0	40	31100	250	7.3	17.9	--	--	8.5	--
04...	1407	3.0	40	--	250	7.4	17.9	--	--	8.4	--
04...	1409	5.0	40	--	250	7.4	18.0	--	--	8.4	--
04...	1411	10	40	--	250	7.4	17.9	--	--	8.4	--
04...	1413	16	40	--	250	7.4	17.7	--	--	8.0	--
04...	1415	23	40	--	250	7.3	17.6	--	--	7.8	--
04...	1417	30	40	--	250	7.3	17.5	--	--	7.6	--
04...	1423	1.0	66	--	250	7.3	18.5	--	--	8.6	--
04...	1425	3.0	66	--	250	7.3	17.6	8	6	8.2	1
04...	1427	5.0	66	--	250	7.3	17.5	--	--	7.9	--
04...	1429	10	66	--	250	7.3	17.5	--	--	7.9	--
04...	1431	16	66	--	250	7.3	17.5	--	--	7.8	--
04...	1432	23	66	--	250	7.3	17.5	--	--	7.8	--
04...	1435	30	66	--	250	7.3	17.5	--	--	7.8	--
04...	1440	39	66	--	250	7.3	17.5	3	8	7.8	<1
AUG											
09...	1050	1.0	40	--	100	7.9	27.5	--	--	8.7	--
09...	1051	3.0	40	--	100	7.9	27.5	--	--	8.7	--
09...	1052	5.0	40	--	100	7.9	27.5	--	--	8.7	--
09...	1053	10	40	--	100	7.4	26.5	--	--	7.0	--
09...	1054	16	40	--	110	7.2	26.5	--	--	6.3	--
09...	1056	1.0	66	--	170	7.3	23.5	--	--	7.9	--
09...	1058	3.0	66	--	170	7.3	23.5	3	3	7.8	7
09...	1100	5.0	66	--	180	7.3	23.5	--	--	7.8	--
09...	1102	10	66	--	180	7.3	23.5	--	--	7.7	--
09...	1104	16	66	--	180	7.5	23.5	--	--	7.6	--
09...	1106	23	66	--	180	7.2	23.4	--	--	7.5	--
09...	1108	30	66	--	180	7.0	23.2	--	--	7.4	--
09...	1110	39	66	--	180	7.0	23.0	5	3	7.4	6
09...	1112	49	66	--	180	6.9	23.0	--	--	7.4	--
09...	1114	56	66	--	180	6.9	23.0	--	--	7.4	--

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	OXYGEN DEMAND BIOCHEM 5 DAY AT 20 DEG C (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	TOTAL CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
NOV											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	1.0	360	<10	21	4.8	7.2	1.4	59	48	18	10
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	1.2	340	<10	20	4.8	7.0	1.1	55	45	18	10
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	1.2	--	<10	20	5.0	6.4	1.2	71	58	18	9.0
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	1.1	--	<10	21	4.9	6.4	1.2	70	57	17	8.0
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	1.2	--	<10	19	4.3	3.8	1.1	73	60	12	5.0
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	<1.0	--	--	20	4.3	3.7	1.1	74	61	12	5.0
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	1.7	--	<10	20	4.6	5.9	1.4	71	58	14	7.0
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	<1.0	--	--	20	4.7	6.3	1.5	68	56	13	7.0
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	SOLIDS RESIDUE ON EVAP AT 180C DIS-SOLVED (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	SOLIDS RESIDUE AT 105C SUS-PENDED (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)
NOV											
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	4.8	80	.11	4	.28	.05	.13	.03	.02	300
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--
03...	--	4.8	90	.12	5	.27	.05	.11	.03	.02	400
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	4.7	70	.10	7	.42	.05	.10	.03	.02	300
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
08...	--	4.6	80	.11	7	.42	.07	.11	.04	.08	300
MAY											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	<.1	4.4	80	.11	7	.40	.10	.14	.03	.01	<200
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
04...	--	4.4	80	.11	11	.38	.04	.12	.04	.01	<200
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	<.1	4.7	80	.11	9	.25	.02	.06	.03	<.01	<200
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	5.2	80	.11	2	.31	.04	.04	.03	<.01	<200
09...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
NOV										
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	<2	<100	<10	70	<1	<5	100	220	<50	<10
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	<2	<100	<10	40	<1	11	30	300	<50	<10
FEB										
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	<2	<100	<10	80	<1	<5	40	400	250	14
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	<2	<100	<10	50	<1	<5	20	270	<50	<10
MAY										
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	<2	<100	<10	80	1	<5	<10	340	<50	<10
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	<2	<100	<10	100	1	<5	50	400	<50	<10
AUG										
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	<2	<100	<10	120	1	<5	50	80	<50	<10
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	<2	<100	<10	80	<1	<5	20	190	--	<10
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
NOV										
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	<10	50	<10	<.2	<50	<1	<10	<1000	110	1.5
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--
03...	<10	50	<10	<.2	<50	<1	<10	<1000	40	1.4
FEB										
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	<10	70	60	<.2	<50	<1	<10	<1000	20	2.4
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
08...	<10	60	30	<.2	<50	1	<10	<1000	10	2.1
MAY										
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	<10	40	10	.6	<50	<1	<10	<1000	60	1.8
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
04...	<10	70	20	<.2	<50	<1	<10	<1000	80	2.5
AUG										
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	<10	30	<10	<.2	<50	<1	<10	<1000	<10	2.3
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--
09...	<10	60	--	<.2	<50	<1	<10	<1000	10	2.0
09...	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--

03566420 WOLFTEVER CREEK NEAR OOLTEWAH, TN

LOCATION.--Lat 35°03'43", long 85°03'59", Hamilton County, Hydrologic Unit 06020001, on right downstream wingwall of county road bridge, 0.6 mi (1.0 km) downstream from Southern Railway bridge, 0.9 mi (1.4 km) south of Ooltewah, 1.6 mi (2.6 km) upstream from Little Wolftever Creek, and at mile 16.1 (25.9 km).

DRAINAGE AREA.--18.8 mi^2 (48.7 km^2).

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 755.08 ft (230.148 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--13 years, 33.4 ft^3/s (0.946 m^3/s), 24.13 in/yr (613 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft^3/s (207 m^3/s) Mar. 16, 1973, gage height, 9.75 ft (2.972 m); minimum, 1.8 ft^3/s (0.051 m^3/s) part of each day Sept. 13-18, 1964, Oct. 10, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 9	2130	700	19.8	4.90	1.494	Apr. 4	2345	1650	46.7	7.15	2.179
Mar. 12	2400	1200	34.0	6.44	1.963	Sept. 7	2045	*2020	57.2	7.49	2.283
Mar. 30	0245	1320	37.4	6.68	2.036						

Minimum discharge, 2.5 ft^3/s (0.071 m^3/s) July 7, Aug. 6, 7, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	8.1	16	36	9.1	59	83	21	5.8	5.2	3.3	3.1
2	3.5	6.5	13	27	9.1	45	66	14	5.5	5.2	3.1	3.1
3	3.8	6.1	11	26	9.1	40	399	36	5.5	4.6	3.1	2.7
4	3.8	5.8	9.6	26	9.6	95	511	23	5.2	4.9	3.1	2.9
5	3.8	5.5	9.1	32	9.6	62	540	17	5.2	5.8	2.9	3.1
6	5.8	5.5	49	51	8.6	184	124	14	5.8	5.5	2.7	3.1
7	6.1	5.1	94	79	8.1	93	80	14	6.1	2.9	2.7	605
8	4.6	5.1	37	44	7.2	62	60	15	5.8	3.8	3.6	250
9	6.5	5.5	24	241	7.6	49	45	12	6.1	3.6	15	26
10	4.8	5.1	19	140	7.6	41	37	10	5.8	3.8	5.5	16
11	4.3	5.5	18	56	7.6	38	31	9.4	5.5	3.6	4.1	14
12	4.0	6.1	54	41	12	363	26	9.0	5.5	7.5	3.6	11
13	4.0	5.1	37	36	14	311	23	9.0	5.5	4.4	4.1	17
14	4.0	5.5	27	56	11	98	21	8.6	6.8	3.8	4.4	35
15	4.0	8.6	106	46	10	70	19	8.2	5.5	3.3	7.9	44
16	4.3	6.5	47	34	9.1	53	17	7.5	6.1	3.1	6.5	133
17	4.3	5.8	32	28	8.6	42	15	7.5	11	2.9	6.8	72
18	4.3	5.8	25	27	9.1	38	14	7.1	7.5	2.9	17	37
19	4.3	5.8	21	24	8.6	31	13	7.1	6.5	2.8	5.2	53
20	5.5	5.5	104	19	8.1	36	13	7.1	10	2.8	4.1	41
21	5.1	5.5	50	17	7.6	29	11	7.8	7.1	3.5	3.8	26
22	4.6	5.1	33	15	7.6	41	55	8.2	5.5	4.1	3.6	19
23	4.6	5.1	28	14	8.1	29	134	9.8	4.9	3.6	12	15
24	6.5	5.1	23	14	216	26	52	9.8	4.9	3.3	6.5	13
25	25	4.8	46	14	67	23	32	11	5.2	4.4	4.4	23
26	9.6	6.5	63	16	46	21	23	11	6.5	4.1	3.8	109
27	6.1	10	38	19	231	20	19	9.4	7.1	3.3	3.3	73
28	5.5	65	32	16	87	27	17	8.2	5.2	3.3	3.3	46
29	5.1	54	26	12	---	217	15	7.1	5.2	3.8	3.3	33
30	12	21	23	11	---	622	16	5.8	5.2	3.6	3.3	38
31	16	---	64	10	---	137	---	5.8	---	3.3	3.1	---
TOTAL	189.8	300.6	1178.7	1227	854.0	3002	2511	350.4	183.5	122.7	159.1	1767.0
MEAN	6.12	10.0	38.0	39.6	30.5	96.8	83.7	11.3	6.12	3.96	5.13	58.9
MAX	25	65	106	241	231	622	540	36	11	7.5	17	605
MIN	3.5	4.8	9.1	10	7.2	20	11	5.8	4.9	2.8	2.7	2.7
CFSM	.33	.53	2.02	2.11	1.62	5.15	4.45	.60	.33	.21	.27	3.13
IN.	.38	.59	2.33	2.43	1.69	5.94	4.97	.69	.36	.24	.31	3.50

CAL YR 1976 TOTAL 8520.2 MEAN 23.3 MAX 502 MIN 3.5 CFSM 1.24 IN 16.86
WTR YR 1977 TOTAL 11845.8 MEAN 32.5 MAX 622 MIN 2.7 CFSM 1.73 IN 23.44

03566510 TENNESSEE RIVER AT CHICKAMAUGA DAM (TAILWATER), TN

LOCATION.--Lat 35°06'11", long 85°13'47", Hamilton County, Hydrologic Unit 06020001, on left downstream side of Chickamauga Dam, 0.1 mi (0.2 km) upstream from Chickamauga Creek, 1.1 mi (1.8 km) south of Hamillville, 3.3 mi (5.3 km) north of Chattanooga, and at mile 471.0 (757.8 km).

DRAINAGE AREA.--20,790 mi^2 (53,846 km^2).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Site located in Nickajack Lake. Flow regulated by many reservoirs above site (see p.390 and water resources data for adjoining states, 1977).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT 19...	0830	32000	150	6.6	18.0	9	1	7.4	5	--	--
NOV 03...	1338	37400	150	7.2	13.5	7	5	--	4	1.0	220
DEC 13...	0830	42000	170	7.3	7.0	5	3	8.1	7	--	--
JAN 17...	0830	42000	170	7.4	4.0	12	35	10.3	5	--	--
FEB 08...	1126	36600	170	7.2	1.7	15	5	13.2	7	1.2	<10
MAR 08...	0830	26000	180	7.5	8.0	10	4	11.0	13	--	--
APR 18...	0830	42000	110	6.9	12.0	20	50	7.8	16	--	--
MAY 26...	0945	40000	150	8.0	22.0	9	11	7.5	2	2.7	1640
JUN 06...	0830	27000	150	7.3	24.0	5	6	5.5	8	--	--
AUG 23...	1630	39500	160	7.8	27.5	6	4	6.5	6	2.6	570

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT 19...	--	16	4.3	6.6	1.2	56	46	15	9.0	<.1	4.8
NOV 03...	<10	20	4.4	7.1	1.1	54	44	18	10	--	5.0
DEC 13...	--	18	4.5	9.1	1.2	65	53	28	11	<.1	4.4
JAN 17...	--	21	4.5	5.7	1.1	62	51	18	10	<.1	4.3
FEB 08...	<10	20	4.6	6.6	1.2	66	54	17	8.0	<.1	4.7
MAR 08...	--	--	--	--	--	72	59	--	--	--	--
APR 18...	--	--	--	--	--	46	38	--	--	--	--
MAY 26...	<10	18	4.6	4.4	1.4	62	51	13	7.0	<.1	--
JUN 06...	--	--	--	--	--	60	49	--	--	--	--
AUG 23...	<10	17	4.2	5.8	1.5	63	52	12	8.0	<.1	--

03566510 TENNESSEE RIVER AT CHICKAMAUGA DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)
OCT										
19...	80	.11	6910	8	.22	.06	.12	.02	--	--
NOV										
03...	90	.12	9090	6	.25	.05	.10	.03	.02	600
DEC										
13...	120	.16	13600	6	.39	.05	.02	.01	--	--
JAN										
17...	80	.11	9070	31	.55	.05	--	.04	--	--
FEB										
08...	70	.10	6920	7	.41	.04	.12	.04	.03	400
MAR										
08...	--	--	--	--	.35	.02	.14	.03	--	--
APR										
18...	--	--	--	--	.45	.13	.29	.04	--	--
MAY										
26...	90	.12	9720	9	.33	.03	.11	.01	--	500
JUN										
06...	--	--	--	--	.31	.06	.21	.03	--	--
AUG										
23...	100	.14	10700	6	.21	.03	.13	.02	--	<200

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT										
19...	--	--	--	--	--	--	--	410	--	--
NOV										
03...	<2	<100	<10	<10	<1	<5	30	410	<50	<10
DEC										
13...	--	--	--	--	--	--	--	350	--	--
JAN										
17...	--	--	--	--	--	--	--	590	--	--
FEB										
08...	<2	<100	<10	60	<1	<5	<10	440	80	15
MAR										
08...	--	--	--	--	--	--	--	380	--	--
APR										
18...	--	--	--	--	--	--	--	7800	--	--
MAY										
26...	--	<100	<10	--	8	--	30	200	100	<10
JUN										
06...	--	--	--	--	--	--	--	<50	--	--
AUG										
23...	--	<100	<10	--	1	--	10	<50	<50	<10

03566510 TENNESSEE RIVER AT CHICKAMAUGA DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
19...	--	70	--	--	--	--	--	--	--	--
NOV										
03...	<10	60	<10	<.2	<50	<1	<10	<1000	50	1.4
DEC										
13...	--	2300	--	--	--	--	--	--	--	--
JAN										
17...	--	70	--	--	--	--	--	--	--	--
FEB										
08...	<10	70	40	<.2	<50	<1	<10	<1000	70	2.0
MAR										
08...	--	70	--	--	--	--	--	--	--	--
APR										
18...	--	2200	--	--	--	--	--	--	--	--
MAY										
26...	<10	60	20	.8	<50	--	<10	<1000	<10	2.5
JUN										
06...	--	100	--	--	--	--	--	--	--	--
AUG										
23...	<10	40	<10	<.2	<50	--	<10	<1000	20	1.6

03567500 SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN

LOCATION.--Lat 35°00'50", long 85°12'27", Hamilton County, Hydrologic Unit 06020001, on right bank 0.3 mi (0.5 km) upstream from bridge on U. S. Highway 11, 1.5 mi (2.4 km) south of Chickamauga, 6.0 mi (9.7 km) east of the city hall in Chattanooga, and at mile 12.4 (20.0 km).

DRAINAGE AREA.--428 mi^2 (1,109 km^2).

PERIOD OF RECORD.--October 1928 to current year. Monthly discharges only for December 1930, published in WSP 1306. Prior to October 1937, published as Chickamauga Creek near Chickamauga.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1937. WSP 1386: 1932.

GAGE.--Water-stage recorder. Datum of gage is 651.12 ft (198.461 m) above mean sea level. Prior to Oct. 7, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good. Some diurnal fluctuation at low flow caused by small mills upstream. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--49 years 700 ft^3/s (19.82 m^3/s), 22.21 in/yr (564 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s (850 m^3/s) Mar. 17, 1973, gage height, 21.70 ft (6.614 m); maximum gage height, 23.75 ft (7.239 m), Mar. 17, 1973, from floodmarks (backwater from Tennessee River); minimum discharge, 61 ft^3/s (1.73 m^3/s) Oct. 8, 1941; minimum gage height, 0.24 ft (0.073 m) Oct. 5, 6, 7, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft^3/s (156 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 14	0430	10400	295	14.57	4.441	Apr. 6	0030	*11400	323	15.06	4.590
Mar. 31	1530	10500	297	14.61	4.453	Sept.8	0400	6120	173	12.08	3.682

Minimum discharge, 110 ft^3/s (3.12 m^3/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	272	391	730	285	1470	6520	350	197	158	127	119
2	166	217	310	530	270	903	2930	331	187	163	120	117
3	164	195	270	469	260	736	3740	504	178	167	116	116
4	160	185	240	461	260	1130	4890	473	173	157	114	119
5	158	175	222	522	261	1570	9230	423	169	152	113	121
6	168	168	315	592	255	2130	8830	371	174	150	116	116
7	190	168	1220	1410	246	2840	4220	342	199	145	113	1660
8	185	170	884	1140	231	1700	1890	361	200	140	129	5570
9	195	168	501	1300	221	1040	1100	345	191	137	235	1920
10	187	168	386	4170	218	835	871	300	188	177	164	456
11	172	168	335	3340	217	726	744	280	185	198	182	384
12	166	175	698	1540	234	1580	642	265	184	148	162	314
13	162	175	1030	859	274	6930	567	257	178	151	138	275
14	158	175	679	840	275	8780	517	248	199	142	156	437
15	160	200	1210	1130	254	4110	475	241	189	137	195	450
16	156	227	1220	865	234	1610	437	235	182	137	154	3420
17	156	215	714	665	220	978	399	229	192	136	185	3520
18	152	195	533	560	213	825	381	223	219	133	182	2070
19	152	190	441	504	213	723	355	229	233	133	170	806
20	160	187	845	457	209	677	336	219	214	136	150	805
21	160	184	1170	426	205	626	307	210	214	132	142	585
22	156	180	697	393	199	776	408	216	200	130	138	444
23	154	182	534	363	198	819	2150	247	187	134	138	377
24	168	177	460	354	2000	643	2070	252	205	128	152	331
25	297	175	496	363	2610	565	872	282	207	131	138	330
26	317	190	1330	358	1430	513	571	262	195	202	130	644
27	245	237	1040	393	1860	474	455	235	185	182	128	1090
28	192	515	699	402	2450	472	389	236	176	147	126	765
29	172	1390	565	361	---	874	343	337	163	128	123	523
30	215	701	472	314	---	5970	324	231	156	131	121	640
31	281	---	702	295	---	9560	---	207	---	131	119	---
TOTAL	5696	7724	20609	26106	15802	62585	56963	8941	5719	4573	4476	28524
MEAN	184	257	665	842	564	2019	1899	288	191	148	144	951
MAX	317	1390	1330	4170	2610	9560	9230	504	233	202	235	5570
MIN	152	168	222	295	198	472	307	207	156	128	113	116
CFSM	.43	.60	1.55	1.97	1.32	4.72	4.44	.67	.45	.35	.34	2.22
IN.	.50	.67	1.79	2.27	1.37	5.44	4.95	.78	.50	.40	.39	2.48

CAL YR 1976 TOTAL 235477 MEAN 643 MAX 5900 MIN 152 CFSM 1.50 IN 20.47
WTR YR 1977 TOTAL 247718 MEAN 679 MAX 9560 MIN 113 CFSM 1.59 IN 21.53

03568000 TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", long 85°16'43", Hamilton County, Hydrologic Unit 06020001, on right bank at Rivermont Golf and Country Club, 0.5 mi (0.8 km) downstream from South Chickamauga Creek, 3.0 mi (4.8 km) downstream from Chickamauga Dam, 3.5 mi (5.6 km) upstream from Walnut Street Bridge in Chattanooga,and at mile 467.6 (752.4 km).

DRAINAGE AREA.--21,400 mi^2 (55,430 km^2), approximately.

PERIOD OF RECORD.--April 1874 to current year. Monthly discharges only for some periods, published in WSP 1306. July 1930 to December 1935, published as "at Hales Bar, near Chattanooga." Gage-height records collected in this vicinity since 1874 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 353: 1874-1912. WSP 783: 1917. WSP 823: 1875(M). WSP 973: 1942. WSP 1306: 1916(M). WSP 1386: 1932-34 (station at Hales Bar near Chattanooga).

GAGE.--Water-stage recorder. Datum of gage is 621.12 ft (189.317 m) above mean sea level. Prior to Feb. 1, 1939, nonrecording or recording gages at several sites from 7.0 mi (11.3 km) upstream from Chattanooga to Hales Bar Dam 33 mi (53 km) downstream at or within 0.2 ft (0.06 m) of present datum, except nonrecording gage at Bridgeport, Ala. 49.9 mi (80.3 km) downstream at different datum Oct. 22, 1913, to Feb. 28, 1915, and Oct. 1, 1918, to Jan. 5, 1921. Auxiliary gages at several sites parts of periods since Feb. 28, 1915. Present auxiliary gage at site 2.2 mi (3.5 km) downstream from base gage at same datum.

REMARKS.--Records excellent. Flow regulated since 1936 by increasing number of upstream reservoirs (see p. 390-392 and Water Resources Data for adjoining states, 1977).

AVERAGE DISCHARGE.--103 years, 37,160 ft^3/s (1,052 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 410,000 ft^3/s (11,600 m^3/s) Mar. 1, 1875, gage height, 53.8 ft (16.40 m), present datum, at Walnut Street, from rating curve extended above 250,000 ft^3/s (7,080 m^3/s); minimum daily, 1,200 ft^3/s (34.0 m^3/s) Nov. 1, 1953; minimum gage height, 0.0 ft (0.00 m) Sept. 11-14, 1881, Sept. 19, 1883.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 57.9 ft (17.65 m) Mar. 11, 1867, present datum at Walnut Street, discharge about 459,000 ft^3/s (13,000 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge,191,000 ft^3/s (5,410 m^3/s) Apr. 5, gage height, 30.39 ft (9.263 m); maximum gage height at Walnut Street, 28.46 ft (8.675 m) Apr. 5; minimum daily discharge, 13,400 ft^3/s (379 m^3/s) Aug. 21, minimum gage height, 10.28 ft (3.133 m) Sept. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24000	38200	37800	43800	33700	27500	51800	30800	40200	33800	28900	31800
2	23800	39200	42400	44100	26900	28000	47800	35400	33600	29400	29400	27900
3	23600	39300	44000	44000	28900	28400	57800	39000	31300	22700	28700	21500
4	23400	38900	43700	44100	21300	15000	79600	34600	28600	26000	26600	20700
5	23400	37500	30000	44100	19100	15300	157000	29900	24900	24300	31300	24600
6	23800	36000	32400	44200	23100	22400	164000	32000	29600	28800	28600	25000
7	24000	35800	40300	45100	28100	30400	139000	28200	27000	36900	25500	36300
8	24000	34500	45600	45200	33500	26500	106000	26500	35400	38300	22800	46300
9	28200	33600	45000	47000	32000	28000	79500	31700	33600	27600	26100	38600
10	33100	33300	46200	54800	23100	30900	73200	32400	31600	26500	29000	38000
11	33100	32500	48200	58800	24000	30900	65000	33000	22900	25900	29800	21700
12	33200	33100	48300	57000	23500	27000	55000	29300	20200	32200	35400	25800
13	33100	33200	48700	57100	25900	53300	50000	32500	32800	33200	30300	26000
14	32800	33200	48800	58500	25900	58700	50000	23100	33100	32700	24200	31000
15	33000	33500	49200	52800	35400	61100	44800	19200	35900	33900	27000	44000
16	33000	31300	49200	44200	32000	55100	41000	32400	35900	33000	36800	44500
17	32800	33200	48400	44600	30200	49300	39200	32700	32500	29600	34100	39100
18	33100	33200	47900	44400	26600	44100	39200	30000	28000	29900	35800	41100
19	33300	28400	47700	44500	21400	34600	39500	33500	26100	31700	35600	40300
20	33100	25900	48000	44500	18800	31400	29600	33000	29000	32600	25000	41600
21	33100	24800	46900	44500	19500	27200	37700	30400	31100	33700	13400	35900
22	33300	27100	44800	44000	24200	34500	40800	25200	33100	29400	27600	34700
23	33200	32500	44700	33800	20600	43000	36900	29300	35000	29700	28100	30800
24	33300	28400	44100	32400	22100	39800	30400	30300	40800	23000	30300	23400
25	33300	24200	40100	38100	25900	35800	29000	32200	24700	33100	31600	19900
26	33700	24600	37100	40900	30400	33400	37700	37500	30500	31500	30900	28500
27	35800	24600	40200	34200	31500	23800	36900	32200	43300	32600	29500	34400
28	40300	20200	35800	33300	30100	24100	36400	31600	34700	30500	29800	34100
29	40400	36700	33300	44300	---	26200	32700	22100	30700	29300	31300	33400
30	38800	38300	33000	37900	---	31800	40100	24800	31300	30300	29500	34000
31	37500	---	33600	30400	---	49600	---	30900	---	28400	30100	---
TOTAL	974500	965200	1325400	1376600	737700	1067100	1767600	945700	947400	940500	903000	974900
MEAN	31440	32170	42750	44410	26350	34420	58920	30510	31580	30340	29130	32500
MAX	40400	39300	49200	58800	35400	61100	164000	39000	43300	38300	36800	46300
MIN	23400	20200	30000	30400	18800	15000	29000	19200	20200	22700	13400	19900

CAL YR 1976 TOTAL 12108500 MEAN 33080 MAX 62400 MIN 11800
WTR YR 1977 TOTAL 12925600 MEAN 35410 MAX 164000 MIN 13400

03570525 TENNESSEE RIVER AT NICKAJACK DAM (TAILWATER), TN

LOCATION.--Lat 35°00'09", long 85°37'16", Marion County, Hydrologic Unit 06020001, at left downstream side of Nickajack Dam, 4.6 mi (7.4 km) south of Jasper, 5.1 mi (8.2 km) southwest of Haletown, and at mile 425.7 (685.0 km).

DRAINAGE AREA.--21,849 mi^2 (56,589 km^2).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Site located in Guntersville Lake. Flow regulated by many reservoirs above site (see p. 390, and water resources data for adjoining states, 1977).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT 18...	1330	32000	160	6.5	18.0	3	1	7.9	8	--	--
NOV 03...	1500	39700	150	7.1	13.5	7	4	8.9	3	1.3	520
DEC 13...	1000	47500	180	7.3	8.0	7	3	10.0	4	--	--
JAN 17...	1145	44500	160	7.1	4.0	10	15	10.5	3	--	--
FEB 08...	1325	30950	180	7.6	2.2	12	7	12.9	9	1.1	<10
MAR 14...	1200	63500	160	7.3	11.0	14	25	9.5	5	--	--
APR 20...	1000	42400	120	7.0	16.0	12	22	--	5	--	--
MAY 26...	1045	37900	150	7.3	23.0	9	15	6.6	9	4.8	620
JUN 09...	0910	29750	150	7.5	23.0	10	9	6.0	2	--	--
AUG 23...	1435	40700	160	8.0	28.0	2	4	7.0	9	2.2	1080

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT 18...	--	17	4.4	7.1	1.3	59	48	14	10	<.1	4.9
NOV 03...	60	20	4.7	7.0	1.3	54	44	18	10	--	4.8
DEC 13...	--	20	3.4	9.5	1.2	--	53	19	14	<.1	4.6
JAN 17...	--	20	4.4	5.9	1.2	67	55	16	8.0	<.1	4.7
FEB 08...	<10	21	4.9	6.6	1.3	68	56	18	9.0	<.1	4.7
MAR 14...	--	--	--	--	--	66	54	--	--	--	--
APR 20...	--	--	--	--	--	43	35	--	--	--	--
MAY 26...	<10	18	4.5	4.6	1.3	57	47	14	8.0	<.1	--
JUN 09...	--	--	--	--	--	62	51	--	--	--	--
AUG 23...	<10	18	3.9	6.3	1.5	65	53	12	9.0	<.1	--

03570525 TENNESSEE RIVER AT NICKAJACK DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)
OCT										
18...	80	.11	6910	5	.25	.06	.10	.03	--	--
NOV										
03...	80	.11	8580	5	.27	.06	.15	.04	.02	200
DEC										
13...	100	.14	12800	6	.41	.07	.05	.04	--	--
JAN										
17...	80	.11	9610	10	.38	.06	.15	.04	--	--
FEB										
08...	90	.12	7520	7	--	--	--	--	<.01	600
MAR										
14...	--	--	--	--	.32	.05	.15	.05	--	--
APR										
20...	--	--	--	--	.36	.12	.04	.04	--	--
MAY										
26...	90	.12	9210	11	.38	.12	.10	.04	--	600
JUN										
09...	--	--	--	--	.33	.09	.10	.03	--	--
AUG										
23...	100	.14	11000	6	.23	.04	.12	.03	--	<200

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT										
18...	--	--	--	--	--	--	--	270	--	--
NOV										
03...	<2	<100	<10	30	<1	<5	30	220	<50	<10
DEC										
13...	--	--	--	--	--	--	--	420	--	--
JAN										
17...	--	--	--	--	--	--	--	470	--	--
FEB										
08...	<2	<100	<10	40	<1	<5	10	370	50	17
MAR										
14...	--	--	--	--	--	--	--	1900	--	--
APR										
20...	--	--	--	--	--	--	--	1000	--	--
MAY										
26...	--	<100	<10	--	8	--	40	140	<50	<10
JUN										
09...	--	--	--	--	--	--	--	400	--	--
AUG										
23...	--	<100	<10	--	2	--	50	80	<50	<10

03570525 TENNESSEE RIVER AT NICKAJACK DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT 18...	--	30	--	--	--	--	--	--	--	--
NOV 03...	<10	30	20	.6	<50	<1	<10	<1000	50	1.6
DEC 13...	--	40	--	--	--	--	--	--	--	--
JAN 17...	--	40	--	--	--	--	--	--	--	--
FEB 08...	<10	70	30	.5	<50	2	<10	<1000	20	1.7
MAR 14...	--	100	--	--	--	--	--	--	--	--
APR 20...	--	70	--	--	--	--	--	--	--	--
MAY 26...	<10	80	50	<.2	<50	--	<10	<1000	30	4.1
JUN 09...	--	60	--	--	--	--	--	--	--	--
AUG 23...	<10	40	<10	<.4	<50	--	<10	<1000	30	1.8

03570835 SEQUATCHIE RIVER NEAR DUNLAP, TN

LOCATION.--Lat 35°21'34", long 85°22'20", Sequatchie County, Hydrologic Unit 06020004, at Alvin C. York Highway bridge,0.4 mi (0.6 km)downstream from Rogers Branch, 1.3 mi (2.1 km) southeast of Dunlap, 3.9 mi (6.3 km) northwest of the Lewis Chapel Post Office, and at mile 44.7 (71.9 km).

DRAINAGE AREA.--292 mi² (756 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
12...	1230	--	290	7.0	15.0	2	2	--	5	--	--
26...	1330	386	200	7.4	14.0	27	32	--	10	--	--
NOV											
05...	1215	--	--	--	8.9	--	--	--	--	1.0	--
11...	1045	89	--	--	9.4	--	--	--	--	1.1	--
22...	1100	46	250	7.5	9.0	5	1	--	6	--	--
DEC											
27...	1100	494	160	7.8	7.0	7	6	--	2	--	--
JAN											
25...	1300	270	180	7.6	7.0	3	7	--	3	--	--
FEB											
28...	1330	1010	130	6.4	10.0	5	6	--	14	--	--
MAR											
21...	1230	1200	150	7.6	14.0	4	5	--	3	--	--
APR											
25...	1400	1350	130	7.2	17.0	14	45	--	9	--	--
MAY											
17...	0943	--	190	7.9	17.1	5	7	8.8	--	2.7	1200
23...	1200	530	91	7.1	19.0	11	18	--	4	--	--
JUN											
02...	1147	--	170	7.5	19.0	10	26	8.0	--	2.2	>2000
27...	1400	180	180	7.9	23.0	3	12	--	4	--	--
JUL											
25...	1330	--	240	7.7	25.0	11	9	--	4	--	--
AUG											
22...	1330	--	210	8.0	22.0	7	23	--	4	--	--
SEP											
12...	1300	--	210	7.1	21.0	6	9	--	6	--	--

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
12...	--	47	6.6	1.9	1.0	146	120	4.0	6.0	<.1
26...	--	--	--	--	--	98	80	35	23	<.1
NOV										
05...	--	--	--	--	--	--	--	--	--	--
11...	70	--	--	--	--	--	--	--	--	--
22...	--	33	6.9	2.3	.6	134	110	9.0	62	<.1
DEC										
27...	--	26	3.6	1.2	.9	87	71	11	2.0	<.1
JAN										
25...	--	32	4.2	1.0	.6	93	76	5.0	6.0	<.1
FEB										
28...	--	--	--	--	--	56	46	--	3.0	--
MAR										
21...	--	--	--	--	--	79	65	--	--	--
APR										
25...	--	25	2.7	1.4	1.5	66	54	10	2.0	<.1
MAY										
17...	340	30	4.9	1.0	.8	110	90	9.0	4.0	<.1
23...	--	--	--	--	--	39	32	--	--	--
JUN										
02...	360	30	5.0	1.6	1.8	93	76	11	4.0	<.1
27...	--	--	--	--	--	93	76	--	--	--
JUL										
25...	--	40	6.8	1.3	1.3	122	100	7.0	4.0	<.1
AUG										
22...	--	--	--	--	--	110	90	--	--	--
SEP										
12...	--	37	5.4	2.0	1.6	102	84	10	36	<.1

03570835 SEQUATCHIE RIVER NEAR DUNLAP, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
12...	5.9	140	.19	--	4	.32	.01	.07	.02	--
26...	4.8	140	.19	146	78	.29	.03	.15	.07	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
22...	2.0	140	.19	17.4	1	.25	<.01	.07	.02	--
DEC										
27...	3.7	90	.12	120	13	.46	.01	.06	.03	--
JAN										
25...	3.7	60	.08	43.7	6	.67	.01	.10	.01	--
FEB										
28...	--	--	--	--	--	.45	.02	.10	.04	--
MAR										
21...	--	--	--	--	--	.62	.02	.10	.03	--
APR										
25...	--	90	.12	328	47	.44	.05	.05	.06	--
MAY										
17...	4.8	120	.16	--	14	.84	.03	.18	.03	.02
23...	--	--	--	--	--	.39	<.01	.06	.02	--
JUN										
02...	5.2	100	.14	--	17	1.1	.02	.15	.05	.01
27...	--	--	--	--	--	.75	.03	.10	.03	--
JUL										
25...	--	140	.19	--	10	.69	.02	.04	.03	--
AUG										
22...	--	--	--	--	--	.69	.01	.09	.04	--
SEP										
12...	--	130	.18	--	13	.72	.01	.03	.04	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
12...	--	--	--	--	--	--	--	--	230	--
26...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
22...	200	<2	<100	<10	70	<1	<5	60	120	--
DEC										
27...	--	--	--	--	--	--	--	--	400	--
JAN										
25...	--	--	--	--	--	--	--	--	340	--
FEB										
28...	--	--	--	--	--	--	--	--	1600	--
MAR										
21...	--	--	--	--	--	--	--	--	430	--
APR										
25...	3000	<2	<100	<10	160	<1	<5	40	1600	--
MAY										
17...	--	--	<100	<10	--	4	<5	30	750	<50
23...	--	--	--	--	--	--	--	--	430	--
JUN										
02...	--	--	<100	<10	--	16	<5	<10	350	<50
27...	--	--	--	--	--	--	--	--	690	--
JUL										
25...	300	<2	<100	<10	380	<1	<5	50	670	--
AUG										
22...	--	--	--	--	--	--	--	--	200	--
SEP										
12...	700	<2	<100	<10	40	<1	<5	440	380	--

03570835 SEQUATCHIE RIVER NEAR DUNLAP, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
12...	--	--	40	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
NOV										
05...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
22...	<10	<10	<10	--	.2	<50	2	<10	<10	1.2
DEC										
27...	--	--	20	--	--	--	--	--	--	--
JAN										
25...	--	--	60	--	--	--	--	--	--	--
FEB										
28...	--	--	30	--	--	--	--	--	--	--
MAR										
21...	--	--	70	--	--	--	--	--	--	--
APR										
25...	<10	<10	130	--	<.2	<50	<1	<10	60	5.0
MAY										
17...	<10	--	30	<10	<.2	<50	--	<10	50	1.7
23...	--	--	70	--	--	--	--	--	--	--
JUN										
02...	<10	--	70	10	<.2	<50	--	<10	70	2.3
27...	--	--	60	--	--	--	--	--	--	--
JUL										
25...	<10	<10	70	--	<.2	<50	<1	<10	40	1.2
AUG										
22...	--	--	90	--	--	--	--	--	--	--
SEP										
12...	<10	<10	50	--	<.2	<50	<2	<10	40	.7

03571000 SEQUATCHIE RIVER NEAR WHITWELL, TN

LOCATION.--Lat 35°12'22", long 85°29'48", Marion County, Hydrologic Unit 06020004, on right bank 15 ft (5 m) downstream from county road bridge,1.5 mi (2.4 km) east of Whitwell, 3.0 mi (4.8 km) upstream from bridge on State Highway 27, 4.5 mi (7.2 km) downstream from Griffith Creek, and at mile 25.1 (40.4 km).

DRAINAGE AREA.--402 mi^2 (1,041 km^2), includes 18 mi^2 (47 km^2) without surface drainage.

PERIOD OF RECORD.--October 1920 to current year. Prior to December 1920 monthly discharges only, published in WSP 1306.

REVISED RECORDS.--WSP 603: 1922(M). WSP 758: 1929(M). WSP 1033: 1943(M). WSP 1386: 1921-22, 1923-25(M), 1927-28(M), 1930(M), 1933(M). WSP 1910: Drainage area. WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 632.73 ft (192.856 m) above mean sea level (levels by Tennessee Valley Authority). Prior to Sept. 18, 1927, nonrecording gage at same site at datum 0.03 ft (0.009 m) higher. Sept. 18, 1927, to Sept. 30, 1930, nonrecording gage at bridge 15 ft (5 m) upstream at present datum.

REMARKS.--Records good. Prior to 1950 some diurnal fluctuation caused by small mills above station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--57 years, 744 ft^3/s (21.07 m^3/s), 25.13 in/yr,(638 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s (920 m^3/s) Mar. 16, 1973, gage height, 17.65 ft (5.380 m); minimum, 16 ft^3/s (0.45 m^3/s) Sept. 6-21, 27, 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of about 19 ft (5.8 m) from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft^3/s (156 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 13	1300	9460	268	13.99	4.264	Apr. 5	0700	*17,700	501	15.53	4.734

Minimum discharge, 58 ft^3/s (1.64 m^3/s) Oct. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	417	662	636	500	1330	1490	584	194	145	90	80
2	84	468	492	628	454	1120	1220	511	172	142	90	77
3	79	393	399	609	425	977	3180	520	159	157	86	76
4	73	323	335	559	405	1790	7550	584	147	150	82	73
5	69	275	286	552	389	2630	15900	566	137	140	80	72
6	75	234	269	705	360	2080	12200	499	91	133	77	71
7	82	203	363	1110	326	1810	8340	502	130	127	76	139
8	81	149	631	1140	297	1490	3410	953	127	177	75	386
9	79	159	756	1200	280	1250	2210	903	122	116	84	250
10	79	147	626	2020	269	1080	1730	704	121	115	93	166
11	79	136	513	1930	258	954	1470	566	118	112	106	142
12	76	129	506	1540	266	2430	1260	479	116	110	91	125
13	73	121	657	1210	357	8420	1060	428	115	107	91	125
14	72	114	753	1120	438	5170	848	388	119	105	116	128
15	70	110	708	1330	492	3110	747	360	125	105	121	1480
16	67	104	669	1380	449	1960	671	332	145	103	274	3140
17	65	99	624	1160	417	1450	612	307	142	99	337	3960
18	62	96	556	1000	396	1210	559	292	152	96	370	1890
19	59	92	486	846	378	1040	517	520	140	93	310	1030
20	62	91	486	756	351	956	485	428	156	90	202	759
21	62	86	510	669	323	902	445	425	207	89	163	578
22	59	81	519	614	300	846	431	380	220	90	140	439
23	58	76	497	542	294	772	689	710	177	91	125	360
24	67	75	454	513	1750	710	1610	1010	172	94	118	307
25	420	73	457	486	1850	664	1900	656	170	99	109	340
26	519	73	669	459	1490	621	1550	442	222	107	103	716
27	640	75	786	684	1460	579	1120	368	236	103	97	1060
28	532	86	789	742	1450	556	851	312	190	96	93	1040
29	372	510	691	698	---	586	710	264	168	93	89	830
30	335	759	609	643	---	1340	626	236	152	93	86	674
31	428	---	636	600	---	1960	---	224	---	90	83	---
TOTAL	4970	5754	17394	28081	16424	51793	75391	15453	4642	3467	4057	20513
MEAN	160	192	561	906	587	1671	2513	498	155	112	131	684
MAX	640	759	789	2020	1850	8420	15900	1010	236	177	370	3960
MIN	58	73	269	459	258	556	431	224	91	89	75	71
CFSM	.40	.48	1.40	2.25	1.46	4.16	6.25	1.24	.39	.28	.33	1.70
IN.	.46	.53	1.61	2.60	1.52	4.79	6.98	1.43	.43	.32	.38	1.90

CAL YR 1976 TOTAL 202891 MEAN 554 MAX 4140 MIN 54 CFSM 1.38 IN 18.77
WTR YR 1977 TOTAL 247939 MEAN 679 MAX 15900 MIN 58 CFSM 1.69 IN 22.94

03571200 SEQUATCHIE RIVER AT WHITWELL WATERWORKS, NEAR WHITWELL, TN

LOCATION.--Lat 35°11'53", long 85°30'31", Marion County, Hydrologic Unit 06020004, at Whitwell city limits, 0.9 mi (1.4 km) upstream from State Route 27 bridge, 2.3 mi (3.7 km) east of Mt. Olive, 3.9 mi (6.3 km) northeast of Victoria, and at mile 23.2 (37.3 km).

DRAINAGE AREA.--410 mi^2 (1,062 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)
OCT												
05...	1500	42	240	7.5	18.9	8	10	8	--	41	7.1	2.5
NOV												
05...	1250	--	--	--	9.4	--	--	--	1.6	--	--	--
10...	1430	125	230	7.6	11.1	--	1	11	--	--	--	--
DEC												
01...	1500	487	180	7.7	5.6	8	7	8	--	26	3.9	4.0
28...	1500	683	160	7.7	7.2	6	7	3	--	24	3.2	2.0
FEB												
07...	1445	230	160	7.9	5.6	4	3	6	--	27	4.3	2.6
APR												
26...	0937	1600	130	7.6	13.3	10	29	13	--	22	2.8	1.7
AUG												
02...	1205	--	220	7.8	--	10	5	6	--	33	6.0	2.1
SEP												
13...	1500	--	210	8.1	--	5	17	6	--	27	3.5	1.6

DATE	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT												
05...	9.8	146	120	9.0	4.0	<.1	6.0	130	.18	14.7	12	.38
NOV												
05...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	120	98	13	7.0	--	5.1	140	.19	47.2	5	.58
DEC												
01...	1.0	90	74	9.0	10	<.1	3.7	100	.14	131	12	.44
28...	.8	78	64	--	3.0	<.1	3.7	--	--	--	8	.19
FEB												
07...	.6	85	70	11	4.0	<.1	2.2	140	.19	86.9	2	.49
APR												
26...	1.0	67	55	10	3.0	<.1	--	80	.11	346	48	.46
AUG												
02...	1.3	116	95	8.0	6.0	<.1	--	140	.19	--	6	.59
SEP												
13...	1.4	107	88	12	4.0	<.1	--	130	.18	--	32	.62

03571200 SEQUATCHIE RIVER AT WHITWELL WATERWORKS, NEAR WHITWELL, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
OCT											
05...	.03	.15	.03	--	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
10...	.07	.23	.03	--	--	--	--	--	--	--	--
OEC											
01...	.03	.19	.09	400	<2	<100	<10	20	2	<5	20
28...	.01	.17	.03	--	--	--	--	--	--	--	--
FEB											
07...	.04	.06	.01	--	--	--	--	--	--	--	--
APR											
26...	.03	.16	.05	800	<2	<100	<10	180	1	<5	50
AUG											
02...	.04	.11	.02	<200	<2	<100	<10	80	<1	<5	60
SEP											
13...	.02	.09	.04	1400	<2	<100	<10	80	<1	<5	30

OATE	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT											
05...	540	--	--	70	--	--	--	--	--	--	--
NOV											
05...	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--
OEC											
01...	360	<10	<10	20	.3	<50	<1	<10	<1000	90	3.2
28...	570	--	--	130	--	--	--	--	--	--	--
FEB											
07...	250	--	--	30	--	--	--	--	--	--	--
APR											
26...	2200	<10	<10	100	<.2	<50	<1	<10	<1000	20	1.6
AUG											
02...	260	<10	<10	60	<.2	<50	<2	<10	<1000	50	3.1
SEP											
13...	600	<10	<10	110	<.2	<50	<2	<10	<1000	90	1.2

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°00'41", long 85°41'51", Marion County, Hydrologic Unit 06030001, on right bank at South Pittsburg Ferry landing on Tennessee State Highway 156, 0.5 mi (0.8 km) downstream from Battle Creek, 0.5 mi (0.8 km) east of South Pittsburg, 4.6 mi (7.4 km) downstream from Sequatchie River, 6.5 mi (10.5 km) downstream from Nickajack Dam, and at mile 418.2 (672.9 km).

DRAINAGE AREA.--22,640 mi^2 (58,640 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1930 to current year. Published as "at Hales Bar, near Chattanooga, Tenn." July 1930 to July 1966.

REVISED RECORDS.--WSP 853: Drainage area. WSP 973: 1942. WSP 1306 (monthly runoff). WSP 1386: 1932-34.

GAGE.--Water-stage recorder. Datum of gage is 581.01 ft (177.092 m) above mean sea level. Prior to Feb. 13, 1932, at site 12.9 mi (20.8 km) upstream at datum 7.85 ft (2.393 m) higher. Feb. 13, 1932, to July 17, 1966, at site 11.5 mi (18.5 km) upstream at datum 7.50 ft (2.286 m) higher. Since Jan. 27, 1939, auxiliary water-stage recorder at site 10.6 mi (17.1 km) downstream.

REMARKS.--Records fair. Flow regulated since 1936 by increasing number of reservoirs above station (see p.390 and Water Resources Data for adjoining states, 1977).

AVERAGE DISCHARGE.--47 years, 37,400 ft^3/s (1,059 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315,000 ft^3/s (8,920 m^3/s) Mar. 18, 1973, gage height, 34.33 ft (10.464 m); minimum daily, 2,900 ft^3/s (82.1 m^3/s) Nov. 1, 15, 1953; minimum gage height, 1.21 ft (0.369 m) Oct. 27, 1931, site and datum used 1932-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 44.6 ft (13.59 m) March 1867, site and datum used 1932-65. Flood of Mar. 8, 1917, reached a stage of 37.4 ft (11.40 m), site and datum used 1932-65, discharge, 320,000 ft^3/s (9,060 m^3/s), from rating curve extended above 225,000 ft^3/s (6,370 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 206,000 ft^3/s (5,830 m^3/s), at 2045 hours Apr. 5, gage height, 28.28 ft (8.620 m); minimum daily, 20,100 ft^3/s (569 m^3/s) Aug. 21; minimum gage height, 11.12 ft (3.389 m) Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28600	44100	42900	49500	40000	40000	69400	36800	43100	37000	33300	32700
2	26100	44600	48100	50300	30700	34700	61100	38100	39000	33600	31800	31100
3	27100	45500	50600	50500	35300	36300	80000	44600	37500	29900	30400	26800
4	28700	44800	49500	50600	27600	26000	100000	43300	32100	31400	29200	25500
5	26000	41500	36300	50700	23800	25700	175000	39000	29600	27100	32600	26600
6	26500	40600	37500	52500	30000	33000	202000	38600	34000	30000	32100	30400
7	26500	40000	43400	53500	35000	41500	182000	34700	32300	41500	27500	43700
8	26300	39800	54700	53800	40000	37400	141000	33400	42100	44800	26700	60800
9	31200	35600	53200	62100	40000	37400	101000	37300	38400	33500	31700	47200
10	37100	37800	54400	71500	30000	36500	85600	38700	35800	30000	31500	47100
11	38300	38600	56200	72200	30000	39900	80000	37100	30900	29900	32800	28000
12	37200	35400	55000	68900	25000	47300	62900	34300	22600	35900	38000	29500
13	37300	36200	55400	65800	25000	85400	61000	36400	38800	36200	35500	29800
14	35600	37300	56500	68400	25000	84900	61500	31700	37900	36700	23800	35400
15	37900	37200	56600	61800	40000	80700	56800	25300	40300	39500	31000	51500
16	36200	36800	56600	47700	35000	71000	48700	37200	40800	41400	37500	55100
17	31200	36000	56600	52900	35000	60600	51900	37700	37500	38300	38300	57100
18	36200	37400	54800	52100	30000	53400	51000	35900	34700	32800	42600	55200
19	38400	32800	53700	51900	25000	43400	50900	38100	31700	34000	41300	51600
20	38600	28500	57000	51400	22000	37400	46400	38800	34100	36100	33100	51100
21	37700	28300	52500	49300	22000	34100	49300	34800	36800	40400	20100	44400
22	37500	28200	49700	49100	25000	39700	50400	31400	36900	33100	29900	41400
23	37200	34400	52000	39300	22000	46800	51900	37200	39700	35600	30300	38500
24	37200	34200	49900	37800	25000	48200	52100	34900	46100	29400	32000	30300
25	37400	26300	46900	40600	30000	42400	43600	36400	33000	34300	38100	26500
26	39600	27500	46900	48900	35000	39300	49500	42700	36400	36400	41000	34300
27	45400	29500	45700	39400	40000	30500	51100	38700	49000	37300	32900	43400
28	46300	23800	45100	37900	35000	31100	45900	35900	36200	38500	31500	42600
29	46500	43800	38400	50000	---	31100	46000	28200	33700	30000	34500	41100
30	46100	46200	37200	43300	---	46200	41800	30700	34100	33600	32600	40200
31	42800	---	37900	35200	---	68900	---	37600	---	33600	33500	---
TOTAL	1104700	1092700	1531200	1608900	858400	1410800	2249800	1125500	1095100	1081800	1017100	1198900
MEAN	35640	36420	49390	51900	30660	45510	74990	36310	36500	34900	32810	39960
MAX	46500	46200	57000	72200	40000	85400	202000	44600	49000	44800	42600	60800
MIN	26000	23800	36300	35200	22000	25700	41800	25300	22600	27100	20100	25500

CAL YR 1976 TOTAL 14116100 MEAN 38570 MAX 77600 MIN 16200
WTR YR 1977 TOTAL 15374900 MEAN 42120 MAX 202000 MIN 20100

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1975 to current year.
WATER TEMPERATURES: July 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1975.

REMARKS.--No record Nov. 4-8 (battery failure). Flow regulated by many reservoirs (see p. and Water Resources Data for adjoining states, 1977).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 193 micromhos Sept. 6, 1975; minimum, 94 micromhos Dec. 31, 1975.
WATER TEMPERATURES: Maximum, 31.0°C Aug. 26-28, 30, 1975; minimum, 2.0°C Jan. 22, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 184 micromhos Sept. 8, 9; minimum, 98 micromhos Apr. 6.
WATER TEMPERATURES: Maximum, 30.5°C Sept. 4, 8, 9; minimum, 2.0°C Jan. 22.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
NOV												
03...	1130	45700	150	7.6	14.0	4	26	81	64	12	19	3.9
23...	1215	37300	155	7.3	10.0	6	--	--	54	5	15	4.0
DEC												
08...	1200	52300	150	7.5	8.0	7	46	67	64	14	19	3.9
JAN												
12...	1230	72800	160	7.4	3.5	15	250	15	71	24	22	4.0
FEB												
24...	1145	35000	180	7.6	7.4	9	19	<1	81	21	22	5.2
MAR												
24...	1100	48500	160	8.0	13.0	6	45	82	75	10	22	4.9
APR												
21...	1130	50800	115	7.2	18.5	20	85	86	53	8	16	3.1
MAY												
26...	1245	43700	150	7.2	22.5	3	81	81	63	17	17	5.1
JUN												
30...	1030	45700	165	7.8	27.0	1	17	86	68	15	20	4.4
JUL												
28...	1115	44500	160	7.3	28.0	1	23	12	66	14	19	4.4
AUG												
30...	1245	45700	160	7.3	28.5	4	--	--	65	14	19	4.3
SEP												
28...	1330	42500	155	7.3	24.5	9	--	--	61	17	18	3.8

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
NOV												
03...	7.0	19	.4	1.4	63	0	52	2.5	13	8.6	.2	5.0
23...	7.7	23	.5	1.6	60	0	49	4.8	14	9.4	.1	5.2
DEC												
08...	8.2	21	.4	1.6	60	0	49	3.0	14	9.8	.1	5.4
JAN												
12...	6.4	16	.3	1.5	60	0	48	3.8	15	7.9	.1	5.0
FEB												
24...	7.0	15	.3	1.5	73	0	60	2.9	14	8.4	.1	1.9
MAR												
24...	6.0	15	.3	1.3	79	0	65	1.3	15	6.5	.0	1.8
APR												
21...	3.4	12	.2	1.6	55	0	45	5.6	10	4.0	.1	5.2
MAY												
26...	5.0	14	.3	1.5	57	0	47	5.8	11	5.8	.1	4.8
JUN												
30...	5.7	15	.3	1.5	65	0	53	1.6	12	6.5	.1	5.1
JUL												
28...	6.4	17	.3	1.5	63	0	52	5.1	11	7.4	.1	5.4
AUG												
30...	6.7	18	.4	1.5	62	0	51	5.0	13	7.5	.1	5.8
SEP												
28...	6.0	17	.3	1.8	53	0	43	4.3	13	6.8	.1	5.6

B--Results based on colony count outside acceptable range (non-ideal colony count).

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	TOTAL FILTRABLE RESIDUE (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL KJEL-DAHL NITROGEN (N) (MG/L)	DIS-SOLVED KJEL. NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL NITROGEN (NO3) (MG/L)
NOV												
03...	87	95	89	.12	10700	1	.30	--	.16	--	.46	2.0
23...	90	--	87	.12	9060	--	.33	--	.13	--	.46	2.0
DEC												
08...	91	--	92	.12	12900	--	.39	--	.22	--	.61	2.7
JAN												
12...	97	--	91	.13	19100	--	.40	--	.28	--	.68	3.0
FEB												
24...	107	--	98	.15	10100	--	.31	--	.62	--	.93	4.1
MAR												
24...	86	92	96	.12	11300	9	.36	--	.24	--	.60	2.7
APR												
21...	83	--	70	.11	11400	--	.36	--	.25	--	.61	2.7
MAY												
26...	80	--	78	.11	9440	--	.33	--	.22	--	.55	2.4
JUN												
30...	107	--	87	.15	13200	--	.33	--	.27	--	.60	2.7
JUL												
28...	89	--	86	.12	10700	--	.32	--	.55	--	.87	3.9
AUG												
30...	91	100	89	.12	11200	4	.30	--	.18	--	.48	2.1
SEP												
28...	83	--	81	.11	9520	--	.35	.06	--	.24	--	--

DATE	TOTAL PHOSPHORUS (P) (MG/L)	DIS-SOLVED PHOSPHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	SUS-PENDED CADMIUM (CD) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)	SUS-PENDED CHROMIUM (CR) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)
NOV												
03...	.02	--	1	0	1	1	1	0	20	20	0	0
23...	.04	--	--	--	--	--	--	--	--	--	--	--
DEC												
08...	.04	--	--	--	--	--	--	--	--	--	--	--
JAN												
12...	.02	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	.06	--	1	1	0	0	0	0	20	20	0	0
MAR												
24...	.03	--	--	--	--	--	--	--	--	--	--	--
APR												
21...	.05	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	.02	--	1	0	1	0	0	0	<10	0	<10	1
JUN												
30...	.02	--	--	--	--	--	--	--	--	--	--	--
JUL												
28...	.03	--	--	--	--	--	--	--	--	--	--	--
AUG												
30...	.05	--	2	0	2	2	2	0	10	9	1	0
SEP												
28...	.04	.03	--	--	--	--	--	--	--	--	--	--

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
NOV												
03...	0	0	2	2	0	240	50	50	48	2	40	20
23...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
12...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
24...	0	0	2	0	2	440	50	6	0	6	60	10
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
21...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	1	0	3	1	2	380	20	22	20	2	100	40
JUN												
30...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
28...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
30...	0	0	15	13	2	310	30	41	33	8	50	10
SEP												
28...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	OIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	OIS-SOLVED ZINC (ZN) (UG/L)	OIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)
NOV												
03...	.0	.0	.0	--	--	0	20	20	0	<1.8	.8	3.2
FEB												
24...	.1	.0	.1	--	--	0	30	30	0	--	--	--
MAR												
24...	--	--	--	--	--	--	--	--	--	<1.2	<.4	2.7
MAY												
26...	.0	.0	.0	0	0	0	60	50	10	--	--	--
AUG												
30...	.0	.0	.0	0	0	0	20	10	10	<1.5	<.4	3.7
SEP												
28...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	OIS-SOLVED RA-226 (RADON METHOD) (PC/L)	OIS-SOLVED URANIUM (U) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	OIS-SOL-VED ORGANIC CARBON (C) (MG/L)	SUS-PENDED ORGANIC CARBON (C) (MG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ATRA-ZINE (UG/L)	ATRA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)
NOV												
03...	.5	2.6	.5	.22	.09	5.2	--	--	NO	NO	ND	ND
FEB												
24...	--	--	--	--	--	6.7	--	--	NO	--	ND	--
MAR												
24...	.6	2.2	.5	.07	.26	--	--	--	--	--	--	--
MAY												
26...	--	--	--	--	--	--	2.7	.7	ND	ND	ND	ND
AUG												
30...	<.4	3.0	<.4	.06	.20	5.9	--	--	NO	--	ND	--
SEP												
28...	--	--	--	--	--	8.7	--	--	--	--	--	--

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL CHLORDANE (UG/L)	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)
NOV												
03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
24...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
30...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
SEP												
28...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)
NOV												
03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
24...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
30...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
SEP												
28...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL METHOXYCHLOR (UG/L)	METHOXYCHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)
NOV												
03...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB												
24...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAR												
24...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG												
30...	ND	--	ND	--	ND	--	ND	--	ND	--	ND	--
SEP												
28...	--	--	--	--	--	--	--	--	--	--	--	--

ND--Material specifically analyzed for but not detected.

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)	SIMAZINE TOTAL COULSON COND. (UG/L)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	TOTAL PHYTOPLANKTON (CELLS PER ML)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
NOV												
03...	ND	ND	ND	ND	ND	ND	ND	ND	36	5	617	100
23...	--	--	--	--	--	--	--	--	300	5	504	100
DEC												
08...	--	--	--	--	--	--	--	--	44	6	847	94
JAN												
12...	--	--	--	--	--	--	--	--	1200	20	3930	100
FEB												
24...	ND	--	ND	--	ND	--	ND	--	15000	19	1800	97
MAR												
24...	--	--	--	--	--	--	--	--	--	12	1570	90
APR												
21...	--	--	--	--	--	--	--	--	--	33	4530	97
MAY												
26...	ND	ND	ND	ND	ND	ND	ND	ND	690	6	708	100
JUN												
30...	--	--	--	--	--	--	--	--	1200	8	987	100
JUL												
28...	--	--	--	--	--	--	--	--	150	--	--	--
AUG												
30...	ND	--	ND	--	ND	--	ND	--	--	8	987	80
SEP												
28...	--	--	--	--	--	--	--	--	--	16	1840	91

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	163	160	161	151	148	149	146	144	145	173	168	171
2	163	160	161	150	147	148	146	143	145	174	172	173
3	163	160	162	150	147	148	147	145	146	175	174	174
4	162	161	161	---	---	---	147	144	146	178	176	177
5	161	159	160	---	---	---	148	145	147	179	178	179
6	160	157	159	---	---	---	151	148	149	180	178	179
7	157	156	157	---	---	---	150	149	149	181	178	180
8	157	155	156	165	164	164	154	149	151	181	174	177
9	156	155	156	165	161	164	158	155	157	176	172	174
10	157	154	156	166	163	164	162	157	160	172	162	167
11	157	155	156	166	164	165	164	162	163	162	156	159
12	156	154	155	166	163	165	165	163	164	162	157	160
13	155	154	154	166	163	165	165	163	164	166	161	164
14	155	153	154	164	162	162	167	165	166	169	166	168
15	154	152	153	163	161	161	167	164	166	167	165	166
16	153	153	153	161	159	160	165	164	165	165	160	162
17	154	153	154	158	156	157	168	165	166	162	160	161
18	153	152	153	157	154	156	169	167	168	164	161	163
19	153	152	153	158	154	156	172	170	171	168	163	166
20	152	150	151	161	157	160	173	166	169	169	166	168
21	152	150	151	162	159	161	169	166	168	170	167	169
22	152	150	151	161	159	161	170	168	169	171	169	170
23	151	149	150	154	151	154	169	168	169	174	170	172
24	150	148	148	150	149	150	171	168	170	174	173	174
25	154	147	150	153	150	152	171	168	169	174	173	174
26	156	153	155	154	153	154	169	166	168	177	174	175
27	153	142	147	155	153	154	170	168	169	177	175	175
28	147	142	144	159	154	157	170	166	168	178	173	176
29	146	144	145	159	156	158	168	166	167	172	168	170
30	145	144	145	155	146	150	169	166	168	169	166	168
31	148	144	146	---	---	---	168	167	168	170	165	168
MONTH	163	142	153	166	146	158	173	143	162	181	156	170

* ND--Material specifically analyzed for but not detected.

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	167	164	166	160	155	158	152	147	149	130	128	129
2	169	164	167	155	153	155	148	146	147	131	129	130
3	171	167	168	159	155	158	149	144	146	135	130	132
4	173	169	171	167	159	163	143	114	128	135	133	134
5	174	172	173	165	146	155	113	101	107	139	133	135
6	175	173	174	152	139	145	102	98	100	137	136	137
7	175	172	173	140	137	139	104	100	103	138	136	137
8	174	170	172	142	140	141	108	104	106	142	137	139
9	173	171	172	144	140	142	113	107	111	140	139	140
10	175	172	173	152	144	148	115	112	113	141	138	140
11	175	172	174	157	152	155	116	112	114	142	141	141
12	176	173	174	160	137	155	118	115	117	144	141	143
13	175	172	173	134	116	120	119	117	118	144	141	143
14	175	172	173	127	118	121	121	118	119	145	142	143
15	174	172	172	137	128	131	121	119	120	146	143	145
16	173	171	172	148	137	142	123	120	121	146	143	144
17	174	171	173	152	148	150	121	120	120	146	144	145
18	177	174	175	155	152	153	121	120	120	147	145	146
19	178	173	175	160	154	157	121	119	120	148	145	147
20	179	177	178	161	159	159	122	120	121	149	146	148
21	180	176	178	163	160	162	123	119	121	150	146	147
22	179	176	177	164	161	163	123	121	122	152	146	149
23	180	177	179	165	162	163	124	122	123	150	147	149
24	181	166	178	161	160	161	122	119	120	150	149	149
25	165	154	159	160	158	159	119	117	118	150	146	149
26	159	154	158	161	159	160	120	117	119	151	147	149
27	163	159	162	163	161	162	121	118	120	153	150	150
28	161	157	159	165	163	164	124	121	122	154	150	152
29	---	---	---	167	163	165	126	124	125	155	151	152
30	---	---	---	165	160	162	129	126	127	154	150	151
31	---	---	---	164	152	159	---	---	---	150	148	149
MONTH	181	154	171	167	116	152	152	98	121	155	128	143
	JUNE			JULY			AUGUST			SEPTEMBER		
1	151	149	150	167	165	166	160	157	158	164	148	159
2	151	150	150	168	165	166	162	156	159	163	160	162
3	151	150	150	169	165	166	162	156	158	147	122	134
4	160	150	151	171	165	167	161	157	159	174	114	147
5	152	149	150	172	166	167	162	155	157	166	153	157
6	151	150	150	170	166	167	157	155	156	168	153	161
7	151	150	150	167	164	166	156	154	155	169	155	162
8	151	149	150	167	165	166	158	155	156	184	148	166
9	152	150	151	169	165	166	158	154	156	184	132	158
10	152	151	152	170	164	166	158	155	156	167	126	152
11	153	151	152	167	163	165	159	156	157	157	131	144
12	157	153	154	166	163	164	161	157	158	157	147	152
13	157	153	154	167	163	164	160	156	158	162	147	154
14	156	154	155	167	163	164	158	156	157	168	149	158
15	157	155	157	165	161	162	158	156	157	169	153	161
16	159	157	158	162	159	161	160	157	158	164	150	157
17	160	157	158	162	160	161	162	159	161	156	147	152
18	162	159	160	164	160	162	162	159	160	159	145	152
19	162	160	161	164	160	161	161	157	159	155	147	151
20	165	159	161	163	159	161	162	159	160	160	130	145
21	164	161	162	163	159	161	163	160	161	163	153	158
22	164	162	163	164	159	161	164	160	161	163	136	149
23	164	163	164	163	159	160	163	160	161	156	147	152
24	165	163	164	164	160	162	163	160	162	151	133	142
25	165	164	164	163	159	160	163	162	163	160	150	155
26	167	164	165	163	159	160	164	161	162	162	153	158
27	167	164	166	160	158	159	166	160	162	178	158	168
28	169	166	167	162	158	160	163	161	161	165	156	160
29	168	165	166	160	157	158	165	160	162	171	118	144
30	168	162	166	161	156	158	164	161	162	170	130	150
31	---	---	---	161	156	158	162	154	158	---	---	---
MONTH	169	149	157	172	156	163	166	154	159	184	114	154
YEAR	184	98	155									

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.0	23.0	23.5	14.5	14.0	14.0	8.5	8.0	8.5	5.5	4.5	5.0
2	24.0	23.0	23.5	14.5	13.5	14.0	8.5	8.0	8.5	4.5	4.5	4.5
3	24.0	22.5	23.5	14.0	13.5	14.0	8.5	8.0	8.0	4.5	4.5	4.5
4	23.5	22.5	23.0	---	---	---	8.5	8.0	8.0	5.0	4.5	4.5
5	23.5	22.5	23.0	---	---	---	8.5	8.0	8.0	5.5	5.0	5.0
6	23.0	22.5	23.0	---	---	---	8.0	8.0	8.0	6.0	5.0	5.5
7	22.5	22.0	22.5	---	---	---	8.0	8.0	8.0	6.5	5.5	6.0
8	22.0	22.0	22.0	12.5	11.0	12.0	8.0	7.5	8.0	6.0	5.5	6.0
9	22.0	21.5	21.5	12.0	11.5	11.5	7.5	7.0	7.5	6.5	5.0	5.5
10	22.0	21.0	21.5	12.0	11.5	12.0	7.5	7.0	7.5	7.0	5.5	6.5
11	21.5	20.5	21.0	11.5	11.0	11.5	8.0	7.5	7.5	5.5	5.0	5.0
12	21.5	20.0	20.5	11.5	11.0	11.5	8.5	8.0	8.0	5.0	4.0	4.5
13	21.5	20.0	20.5	11.0	10.5	11.0	8.5	8.0	8.5	5.0	4.5	4.5
14	21.5	20.0	20.5	10.5	10.5	10.5	8.5	7.5	8.0	5.5	4.5	5.0
15	21.0	20.0	20.5	10.5	10.0	10.5	8.5	8.0	8.0	6.5	5.5	6.0
16	20.5	20.0	20.0	10.5	10.0	10.0	8.5	8.0	8.0	6.5	4.5	5.5
17	20.5	19.5	20.0	10.5	10.0	10.0	8.0	7.5	8.0	4.5	3.5	4.0
18	20.0	19.0	19.5	10.5	10.0	10.0	8.5	8.0	8.0	4.0	3.0	3.5
19	19.5	19.0	19.5	10.5	10.0	10.0	8.5	8.0	8.0	3.5	3.0	3.0
20	19.0	18.5	19.0	10.5	10.0	10.5	8.5	8.0	8.5	3.0	2.5	3.0
21	18.5	18.0	18.5	10.5	10.0	10.0	8.0	7.0	7.5	3.0	2.5	2.5
22	18.5	17.5	18.0	10.0	9.5	10.0	7.0	6.5	7.0	3.0	2.0	2.5
23	18.0	17.0	17.5	10.0	9.0	9.5	7.0	6.5	6.5	3.0	2.5	2.5
24	17.5	17.0	17.5	10.0	9.0	9.5	6.5	6.0	6.5	3.0	3.0	3.0
25	17.0	16.5	17.0	10.0	9.0	9.5	6.5	6.0	6.0	4.0	3.0	3.0
26	16.5	16.0	16.0	9.5	9.5	9.5	7.0	6.0	6.5	4.0	2.5	3.0
27	16.0	15.5	15.5	10.0	9.5	10.0	7.0	6.5	6.5	5.5	3.5	4.5
28	15.5	15.0	15.5	10.5	10.0	10.0	7.5	6.5	7.0	6.0	4.0	5.0
29	15.5	15.0	15.0	10.0	9.0	9.5	7.0	6.0	6.5	4.0	3.0	3.5
30	15.0	14.5	14.5	9.0	8.5	9.0	6.5	6.0	6.0	4.5	3.0	3.5
31	14.5	14.0	14.0	---	---	---	6.0	5.5	6.0	5.0	3.0	3.5
MONTH	24.0	14.0	19.5	14.5	8.5	11.0	8.5	5.5	7.5	7.0	2.0	4.5

		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	2.5	3.0	9.5	8.5	9.0	15.0	15.0	15.0	18.5	18.0	18.5
2	4.5	2.5	3.5	9.5	8.5	9.0	15.5	15.0	15.5	19.0	18.5	18.5
3	4.5	2.5	3.5	9.5	9.0	9.5	15.5	15.5	15.5	18.5	18.5	18.5
4	4.5	3.0	4.0	11.0	9.5	10.0	15.5	14.5	15.0	18.5	18.5	18.5
5	4.5	3.0	4.0	10.5	10.0	10.5	15.0	14.5	14.5	19.5	18.5	19.0
6	4.5	2.5	3.5	10.5	10.0	10.5	14.5	14.0	14.0	20.0	19.0	19.5
7	4.0	2.5	3.5	10.5	10.0	10.5	15.0	14.0	14.5	19.5	19.0	19.5
8	3.5	2.5	3.0	10.5	10.0	10.5	15.5	14.5	15.0	20.0	19.5	20.0
9	4.0	3.0	3.5	11.0	10.5	10.5	15.5	15.0	15.5	20.0	19.5	19.5
10	4.5	3.0	4.0	11.0	10.5	11.0	16.0	15.0	15.5	20.0	19.0	19.5
11	5.0	3.0	4.0	11.5	11.0	11.5	16.5	15.5	16.0	20.0	19.0	19.5
12	5.0	3.5	4.0	13.5	11.5	12.5	16.5	16.0	16.5	21.0	19.5	20.0
13	6.0	4.0	5.0	13.0	12.0	12.5	17.0	16.5	16.5	21.0	19.5	20.0
14	6.0	4.0	5.0	13.0	12.5	13.0	17.5	16.5	17.0	21.0	19.5	20.5
15	6.5	5.0	5.5	13.0	12.5	13.0	17.5	17.0	17.5	22.0	20.0	21.0
16	6.0	5.0	5.5	13.5	13.0	13.0	18.5	17.0	18.0	21.5	20.5	21.0
17	6.0	5.0	5.0	13.0	12.5	12.5	19.0	17.5	18.5	22.0	21.0	21.5
18	6.0	4.5	5.5	13.5	12.5	13.0	19.0	18.5	18.5	22.0	21.0	21.5
19	6.0	5.0	6.0	13.5	13.0	13.0	19.5	18.5	19.0	22.5	21.5	22.0
20	6.0	5.0	6.0	13.5	13.0	13.0	19.5	18.5	19.0	23.0	21.5	22.0
21	6.5	5.0	5.5	13.0	13.0	13.0	19.5	18.5	19.0	23.0	21.5	22.5
22	6.5	5.0	6.0	13.0	12.5	13.0	18.5	18.5	18.5	22.5	22.0	22.0
23	7.0	6.0	6.5	13.0	12.5	12.5	18.5	18.0	18.5	23.5	22.0	22.5
24	9.5	6.5	8.5	13.5	12.5	13.0	18.0	18.0	18.0	23.0	22.5	23.0
25	9.5	8.5	9.0	13.5	12.5	13.0	18.0	18.0	18.0	23.0	22.0	22.5
26	9.5	8.5	9.0	14.0	13.0	13.5	18.0	17.0	17.5	23.5	22.0	22.5
27	9.5	9.0	9.5	14.5	13.5	14.0	18.0	17.0	17.5	23.5	23.0	23.0
28	9.5	9.0	9.5	14.5	14.0	14.0	18.0	16.5	17.5	24.0	23.0	23.5
29	---	---	---	14.5	14.0	14.5	18.0	17.5	18.0	24.0	23.0	23.5
30	---	---	---	15.5	14.5	15.0	18.5	18.0	18.0	24.0	23.5	23.5
31	---	---	---	15.5	15.0	15.0	---	---	---	24.5	23.5	24.0
MONTH	9.5	2.5	5.5	15.5	8.5	12.0	19.5	14.0	17.0	24.5	18.0	21.0

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	23.5	24.0	27.5	26.5	27.0	28.0	27.0	27.5	29.0	28.0	28.5
2	25.0	24.0	24.0	27.5	26.5	27.0	28.5	27.0	27.5	28.5	28.0	28.5
3	25.0	24.0	24.5	27.5	27.0	27.0	28.0	27.0	27.5	28.5	25.5	27.0
4	25.5	24.0	24.5	27.5	26.5	27.0	27.5	27.0	27.0	30.5	24.0	27.5
5	25.5	24.0	25.0	28.0	27.0	27.5	28.0	27.0	27.5	30.0	28.0	28.5
6	26.0	24.5	25.0	28.5	27.0	28.0	28.5	27.5	28.0	30.0	28.0	29.0
7	26.0	24.5	25.0	29.0	27.5	28.0	28.0	27.5	27.5	29.5	28.0	29.0
8	25.5	24.0	25.0	29.0	28.0	28.5	28.5	27.5	28.0	30.5	29.5	30.0
9	25.0	24.0	24.5	29.5	28.0	28.5	28.5	27.5	28.0	30.5	25.5	28.0
10	25.0	24.0	24.5	29.5	28.0	28.5	28.5	27.5	28.0	28.5	25.5	26.5
11	25.5	24.0	24.5	29.0	28.0	28.5	28.5	27.5	28.0	26.0	25.0	25.5
12	25.5	24.0	24.5	29.0	28.0	28.5	29.0	27.5	28.0	27.0	25.0	26.0
13	25.5	24.0	25.0	29.5	28.5	29.0	29.0	28.0	28.5	27.0	25.0	26.0
14	25.5	25.0	25.0	29.5	28.5	29.0	29.5	28.5	29.0	28.0	25.0	26.0
15	25.5	24.5	25.0	29.5	29.0	29.0	29.0	28.5	28.5	29.0	25.0	27.0
16	25.5	24.5	25.0	30.0	29.0	29.5	29.5	28.0	28.5	26.5	24.0	25.0
17	25.5	24.5	25.0	30.0	29.0	29.5	28.5	28.0	28.5	27.5	24.0	25.5
18	25.5	25.0	25.0	30.0	29.0	29.5	28.5	27.5	28.0	28.5	24.5	26.5
19	26.0	25.0	25.5	30.0	29.0	29.5	28.0	27.0	27.5	28.0	25.0	26.5
20	26.0	25.5	25.5	29.5	29.0	29.5	28.5	27.0	27.5	27.0	24.0	25.5
21	26.0	25.5	25.5	30.0	29.0	29.5	28.0	27.0	27.5	28.0	24.5	26.0
22	26.0	25.5	25.5	29.5	29.0	29.5	28.5	27.5	28.0	28.5	24.5	26.5
23	26.5	25.5	25.5	29.5	29.0	29.5	28.5	27.5	28.0	29.0	24.5	26.0
24	26.5	25.5	26.0	29.0	29.0	29.0	28.5	27.0	27.5	28.5	24.0	26.0
25	27.0	26.0	26.0	29.0	28.5	29.0	28.5	27.0	28.0	26.0	24.5	25.0
26	27.0	26.0	26.5	29.5	28.5	29.0	28.0	27.5	27.5	25.0	22.0	24.0
27	27.0	26.0	26.5	29.5	28.5	29.0	28.5	27.5	28.0	24.5	21.5	23.0
28	27.0	26.0	26.5	28.5	27.5	28.0	28.5	27.5	28.0	25.0	23.0	24.0
29	27.0	26.0	26.5	27.5	27.0	27.5	28.5	27.5	28.0	26.5	23.5	24.5
30	27.5	26.5	27.0	28.0	27.0	27.5	28.5	27.5	28.0	23.5	21.0	22.5
31	---	---	---	28.0	27.0	27.5	29.0	28.0	28.0	---	---	---
MONTH	27.5	23.5	25.5	30.0	26.5	28.5	29.5	27.0	28.0	30.5	21.0	26.5
YEAR	30.5	2.0	17.5									

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE TIME	NOV 3.76 1130		NOV 23.76 1215		DEC 8.76 1200		JAN 12.77 1230		FEB 24.77 1145	
TOTAL CELLS/ML	36		300		44		1200		15000	
DIVERSITY: DIVISION	1.5		0.7		0.7		1.2		1.1	
.CLASS	1.5		0.7		0.7		1.2		1.1	
..ORDER	1.5		0.8		1.7		1.4		1.2	
...FAMILY	1.5		0.9		2.1		1.5		1.3	
....GENUS	1.5		1.0		2.7		1.8		2.0	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	--	-	*	0
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	--	-	--	-
....CHODATELLA	--	-	--	-	3	7	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	170	1
....OOCYSTIS	--	-	--	-	--	-	--	-	170	1
....POLYDRIOPSIS	--	-	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	3	7	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	12	1	--	-
....SCENEDESMUS	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	--	-	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	--	-	--	-	29	2	87	1
..ZYGNEMATALES										
...DESMIDIACEAE										
....COSMARIUM	--	-	--	-	3	7	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	12#	33	30	10	6	13	77	7	4200#	29
....MELOSIRA	--	-	3	1	15#	33	170	15	5300#	36
....STEPHANODISCUS	--	-	3	1	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	--	-	12	1	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	--	-	*	0	--	-
...DIATOMACEAE										
....DIATOMA	--	-	3	1	--	-	8	1	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	130	1
....FRAGILARIA	--	-	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	9#	20	12	1	*	0
...NAVICULACEAE										
....NAVICULA	--	-	3	1	--	-	20	2	--	-
....PINNULARIA	--	-	--	-	3	7	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	--	-	--	-	3	7	*	0	*	0
...SURIRELLACEAE										
....SURIRELLA	--	-	3	1	--	-	--	-	130	1
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBRYON	--	-	--	-	--	-	--	-	--	-
....OCHROMONAS	--	-	5	2	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....ANACYSTIS	6#	17	--	-	--	-	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE	--	-	--	-	--	-	--	-	--	-
....LYNGBYA	--	-	--	-	--	-	20	2	--	-
....OSCILLATORIA	--	-	250#	83	--	-	770#	66	4300#	29

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	NOV 3,76		NOV 23,76		DEC 8,76		JAN 12,77		FEB 24,77	
TIME	1130		1215		1200		1230		1145	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	--	-	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE	--	-	--	-	--	-	--	-	--	-
....CRYPTOMONAS	--	-	--	-	--	-	16	1	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	18#	50	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	--	-	--	-	--	-	*	0	--	-

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	MAY 26,77	JUN 30,77	JUL 28,77	AUG 30,77	SEP 28,77
TIME	1245	1030	1115	1245	1330
TOTAL CELLS/ML	690	1200	150	370	98
DIVERSITY: DIVISION	1.8	1.2	1.0	1.4	0.0
.CLASS	1.9	1.3	1.0	1.4	0.0
..ORDER	2.1	1.7	1.7	1.8	0.0
...FAMILY	2.6	1.8	1.9	2.1	0.0
....GENUS	0.0	2.5	1.9	2.6	0.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	*	0	--	-	7	5	--	-	--	-
...MICRACTINIACEAE										
....ERRERELLA	--	-	89	7	--	-	--	-	--	-
....GOLENKINIA	--	-	11	1	--	-	--	-	--	-
....MICRACTINIUM	100	15	--	-	--	-	44	12	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	8	1	11	1	--	-	--	-	--	-
....CHODATELLA	--	-	11	1	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	27#	18	--	-	--	-
....POLYDRIOPSIS	--	-	--	-	--	-	7	2	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-
....TREUBARIA	4	1	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	--	-	--	-	--	-	29	8	--	-
....SCENEDESMUS	49	7	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CARTERIA	12	2	--	-	--	-	--	-	--	-
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-
...VOLVOCACEAE										
....PANDORINA	*	0	--	-	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	110#	15	--	-	--	-	66#	18	--	-
....MELOSIRA	210#	31	--	-	67#	45	130#	35	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	33	3	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	*	0	--	-	--	-	--	-	98#	100
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIA	*	0	--	-	--	-	--	-	--	-
....SYNEDRA	4	1	11	1	40#	27	--	-	--	-
...NITZSCHIACEAE										
....NITZSCHIA	8	1	--	-	--	-	15	4	--	-
...SURIRELLACEAE										
....SURIRELLA	*	0	--	-	--	-	--	-	--	-
.CHRYSOPHYCEAE										
..CHRYSOMONADALES										
...OCHROMONADACEAE										
....DINOBRYON	12	2	--	-	--	-	--	-	--	-
....OCHROMONAS	--	-	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....ANACYSTIS	--	-	450#	37	--	-	44	12	--	-
..HORMOGONALES										
...NOSTOCACEAE	20	3	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE	29	4	--	-	--	-	--	-	--	-
....LYNGBYA	--	-	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	130	11	--	-	36	10	--	-
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....GOMPHOSPHAERIA	--	-	310#	26	--	-	--	-	--	-

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	MAY 26,77		JUN 30,77		JUL 28,77		AUG 30,77		SEP 28,77	
TIME	1245		1030		1115		1245		1330	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOCHRYSIDACEAE										
....CHROOMONAS	57	8	--	-	--	-	--	-	--	-
...CRYPTOMONODACEAE	61	9	--	-	--	-	--	-	--	-
....CRYPTOMONAS	--	-	130	11	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	11	1	--	-	--	-	--	-
....TRACHELOMONAS	--	-	11	1	7	5	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...GLENODINIACEAE										
....GLENODINIUM	4	1	--	-	--	-	--	-	--	-

03578000 ELK RIVER NEAR PELHAM, TN

LOCATION.--Lat 35°17'48", long 85°52'12", Grundy County, Hydrologic Unit 06030003, on right bank at downstream side of bridge on U. S. Highway 41, 1.1 mi (1.8 km) southeast of Pelham, 1.8 mi (2.9 km) upstream from Caldwell Creek, and at mile 194.2 (312.5 km).

DRAINAGE AREA.--65.6 mi^2 (169.9 km^2).

PERIOD OF RECORD.--October 1951 to current year. Prior to November 1951 monthly discharges only, published in WSP 1726.

REVISED RECORDS.--WRD TN 1973: 1963(P), 1965(M), 1966(P), 1969(M), 1970-71(P).

GAGE.--Water-stage recorder. Datum of gage is 981.62 ft (299.198 m) above mean sea level.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--26 years, 144 ft^3/s (4.021 m^3/s), 29.40 in/yr (747 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s (447 m^3/s) Mar. 16, 1973, gage height, 14.08 ft (4.292 m); minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 27, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 12	2330	3580	101	11.23	3.423	Apr. 4	1800	*15600	442	14.05	4.282

Minimum discharge, 4.5 ft^3/s (0.127 m^3/s) Aug. 9, Sept. 4, 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	109	145	136	94	294	200	76	30	29	6.0	5.2
2	22	82	113	104	78	227	174	72	25	27	5.5	5.0
3	18	66	89	98	69	198	547	220	22	24	5.2	5.0
4	15	57	73	97	69	793	6590	234	20	21	5.2	4.7
5	13	49	63	151	72	889	3090	173	19	20	5.0	4.5
6	12	43	58	240	62	447	1040	118	18	16	5.0	4.5
7	16	38	159	358	54	342	463	261	16	14	5.0	8.4
8	32	35	222	272	48	267	306	321	13	13	4.7	49
9	29	32	172	280	47	219	240	198	13	12	5.7	35
10	34	28	128	498	45	190	198	123	12	11	6.5	23
11	27	29	105	341	45	154	161	84	11	13	5.2	17
12	22	28	198	243	59	1070	128	65	10	12	5.5	13
13	18	28	235	193	126	2140	107	52	9.4	9.7	5.5	11
14	16	27	193	233	98	769	94	45	8.7	8.7	12	17
15	14	26	159	359	85	368	80	39	8.7	8.4	25	101
16	13	26	144	281	74	269	70	35	8.4	7.7	12	187
17	13	26	113	207	67	217	63	31	49	7.4	14	246
18	13	24	92	168	63	190	57	31	77	7.4	28	122
19	13	24	76	154	61	152	54	39	31	7.1	26	116
20	13	23	120	154	56	178	49	56	80	6.5	16	241
21	17	22	213	154	51	174	44	66	142	6.5	12	134
22	17	22	152	152	48	146	47	46	61	6.3	10	70
23	15	20	124	121	51	121	246	51	39	6.0	8.4	48
24	22	19	100	70	797	103	543	57	38	6.0	8.0	36
25	417	19	104	82	584	90	354	50	48	6.8	12	34
26	1030	19	243	75	297	82	239	45	220	6.5	12	84
27	326	36	202	250	487	78	179	40	144	6.0	8.7	144
28	165	105	168	244	451	74	128	50	70	6.0	7.7	187
29	103	339	131	184	---	99	96	100	45	6.5	6.8	116
30	81	237	102	131	---	233	80	50	34	6.3	6.3	85
31	132	---	148	111	---	254	---	35	---	6.0	5.7	---
TOTAL	2707	1638	4344	6141	4138	10827	15667	2863	1322.2	343.8	300.6	2153.3
MEAN	87.3	54.6	140	198	148	349	522	92.4	44.1	11.1	9.70	71.8
MAX	1030	339	243	498	797	2140	6590	321	220	29	28	246
MIN	12	19	58	70	45	74	44	31	8.4	6.0	4.7	4.5
CFSM	1.33	.83	2.13	3.02	2.26	5.32	7.96	1.41	.67	.17	.15	1.10
IN.	1.54	.93	2.46	3.48	2.35	6.14	8.88	1.62	.75	.19	.17	1.22

CAL YR 1976 TOTAL 43231.0 MEAN 118 MAX 1360 MIN 4.3 CFSM 1.80 IN 24.52
WTR YR 1977 TOTAL 52444.9 MEAN 144 MAX 6590 MIN 4.5 CFSM 2.20 IN 29.74

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN

LOCATION.--Lat 35°17'08", long 86°06'20", Franklin County, Hydrologic Unit 06030003, on left bank at bridge on Corn Mill Road, 1.7 mi (2.7 km) northeast of Estill Springs, 2.7 mi (4.3 km) downstream from Elk River Dam, 4.0 mi (6.4 km) upstream from U. S. Highway 41A bridge, and at mile 167.3 (269.2 km).

DRAINAGE AREA.--275 mi^2 (712 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306 and 1726. Prior to January 1967 published as "at Estill Springs."

REVISED RECORDS.--WSP 803: 1929(M), 1934-35, WSP 1306: 1922(M).

GAGE.--Water-stage recorder. Datum of gage is 886.43 ft (270.184 m) above mean sea level. Prior to Oct. 1, 1926, nonrecording gage, and Oct. 1, 1926, to Dec. 31, 1966, water-stage recorder at site 4.0 mi (6.4 km) downstream at datum 27.33 ft (8.330 m) lower. Water-stage recorder at present site and datum since Nov. 22, 1966.

REMARKS.--Record good. Flow regulated by Woods Reservoir (station 03579000) 2.7 mi (4.3 km) upstream.

AVERAGE DISCHARGE.--57 years, 490 ft^3/s (13.88 m^3/s), 24.20 in/yr (615 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s (1,080 m^3/s) Mar. 16, 1973, gage height, 20.33 ft (6.197 m); minimum, 10 ft^3/s (0.28 m^3/s) Oct. 9, 10, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,100 ft^3/s (852 m^3/s) Apr. 4, gage height, 19.00 ft (5.791 m); minimum, 24 ft^3/s (0.68 m^3/s) July 20, 21, 22, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	415	486	527	302	1080	493	924	150	134	34	36
2	71	292	485	518	302	805	564	386	149	134	33	36
3	94	292	423	423	299	790	1510	578	149	134	32	36
4	104	292	339	319	264	3360	17300	827	149	132	32	35
5	80	210	335	305	163	2630	15600	555	124	125	32	37
6	176	126	335	551	161	1800	4340	246	93	117	30	36
7	301	125	335	1090	232	1180	2760	683	65	94	30	571
8	234	126	332	921	217	743	2090	1070	59	59	31	298
9	124	120	335	941	217	311	1480	640	45	60	30	33
10	123	120	334	1270	217	353	1110	312	45	62	34	35
11	125	163	336	1150	217	606	785	225	45	62	37	38
12	124	206	426	1160	312	2590	496	225	45	59	34	37
13	126	124	485	1150	299	5180	460	225	45	59	36	37
14	184	143	486	1150	222	3080	501	225	45	58	46	132
15	230	200	486	1110	222	1510	581	223	45	58	208	776
16	174	120	486	897	222	799	465	222	45	57	155	927
17	174	120	454	618	222	729	370	222	367	57	199	773
18	176	120	406	411	222	560	343	224	384	57	268	357
19	386	120	405	501	222	453	302	225	105	38	150	832
20	1160	119	406	501	222	625	294	225	105	24	35	966
21	572	118	403	451	222	503	283	225	103	24	33	435
22	77	120	405	363	222	375	356	495	243	24	34	293
23	76	121	405	363	227	296	703	355	266	24	32	146
24	266	106	404	363	696	268	1560	110	237	24	33	151
25	1110	70	406	363	1450	223	1300	154	657	26	34	383
26	1590	110	405	367	1140	222	713	222	656	26	33	386
27	1260	273	404	540	1160	297	413	249	467	26	33	379
28	433	213	385	805	1420	382	526	259	213	26	35	641
29	300	389	389	652	---	393	481	113	121	28	36	632
30	384	487	392	443	---	353	510	174	130	30	34	238
31	481	---	439	392	---	587	---	221	---	33	34	---
TOTAL	10820	5560	12552	20615	11293	33083	58689	11139	5352	1871	1857	9712
MEAN	349	185	405	665	403	1067	1956	359	178	60.4	59.9	324
MAX	1590	487	486	1270	1450	5180	17300	1070	657	134	268	966
MIN	71	70	332	305	161	222	283	110	45	24	30	33
(†)	-2500	+300	-100	-2100	+2400	+2300	0	0	0	-100	0	-100
MEAN‡	268	195	402	597	489	1141	1956	359	178	57.1	59.9	320
CFSM‡	0.97	0.71	1.46	2.17	1.78	4.15	7.11	1.30	0.65	0.21	0.22	1.16
IN.‡	1.12	0.79	1.68	2.50	1.85	4.78	7.94	1.51	0.72	0.24	0.25	1.30

CAL YR 1976	TOTAL	138205	MEAN	378	MAX	2810	MIN	45	MEAN‡	379	CFSM‡	1.38	IN‡	18.74
WTR YR 1977	TOTAL	182543	MEAN	500	MAX	17300	MIN	24	MEAN‡	500	CFSM‡	1.82	IN‡	24.70

† Change in contents, in cfs-days, in Woods Reservoir.
‡ Adjusted for change in contents.

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1971 to January 1977 (discontinued).

INSTRUMENTATION.--Temperature recorder since July 1971.

REMARKS.--No record Jan. 20-26, 30-31.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 34.0°C Sept. 8, 1973; minimum, 3.0°C Jan. 14-18, 27, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, October to January, 21.5°C Oct. 4; minimum, 3.0°C Jan. 14-18, 27.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
06...	1210	117	170	--	20.0	--	--	--	--	--	--
12...	1015	121	150	6.4	15.6	2	7	8.5	8	--	--
29...	1043	147	--	--	13.9	--	--	--	--	1.5	--
NOV											
16...	1030	119	180	7.7	8.9	6	1	12.6	9	--	--
DEC											
07...	1000	301	160	7.8	7.0	7	3	12.2	7	--	--
FEB											
02...	1200	320	175	--	4.5	--	--	--	--	--	--
08...	1005	222	150	6.5	2.8	8	4	10.4	7	1.4	120
MAR											
02...	1335	814	180	--	9.5	--	--	--	--	--	--
MAY											
03...	1750	672	105	--	15.0	--	--	--	--	--	--
24...	1044	111	140	7.5	18.0	13	15	9.6	6	2.1	1000
JUN											
08...	1010	66	120	--	17.0	--	--	--	--	--	--
AUG											
17...	1000	158	89	7.4	21.0	25	17	7.1	8	2.6	<100

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
12...	--	26	4.1	1.6	.8	76	62	10	5.0	<.1
29...	100	--	--	--	--	--	--	--	--	--
NOV										
16...	--	29	3.3	1.6	.6	109	89	12	4.0	<.1
DEC										
07...	--	26	4.3	2.2	.6	99	81	7.0	6.0	<.1
FEB										
02...	--	--	--	--	--	--	--	--	--	--
08...	<10	28	4.2	2.7	.8	23	19	9.0	6.0	<.1
MAR										
02...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
24...	<100	21	3.5	.4	.9	71	58	8.0	4.0	<.1
JUN										
08...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	<100	26	3.5	1.8	1.2	84	69	5.0	4.0	<.1

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
12...	3.3	90	.12	29.4	7	.09	.03	.19	.02	.01
29...	--	--	--	--	--	--	--	--	--	--
NOV										
16...	2.9	110	.15	35.3	2	.13	.02	.37	.04	.01
DEC										
07...	2.6	110	.15	89.4	2	.18	.02	.18	.02	<.01
FEB										
02...	--	--	--	--	--	--	--	--	--	--
08...	3.5	100	.14	59.9	2	.53	.03	.11	.02	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
24...	--	90	.12	27.0	11	.58	.04	.14	.02	--
JUN										
08...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	--	90	.12	38.4	11	.11	.44	.26	.05	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	470	<50
29...	--	--	--	--	--	--	--	--	--	--
NOV										
16...	--	--	--	--	--	--	--	--	100	70
DEC										
07...	--	--	--	--	--	--	--	--	380	<50
FEB										
02...	--	--	--	--	--	--	--	--	--	--
08...	400	<2	<100	<10	40	<1	<5	50	480	60
MAR										
02...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
24...	700	--	<100	<10	--	<1	--	70	530	<50
JUN										
08...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	<200	--	<100	<10	--	<1	--	<10	1600	420

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
12...	--	--	130	30	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
16...	--	--	40	20	--	--	--	--	--	--
DEC										
07...	--	--	50	20	--	--	--	--	--	--
FEB										
02...	--	--	--	--	--	--	--	--	--	--
08...	16	<10	50	20	<.2	<50	<1	<10	50	2.0
MAR										
02...	--	--	--	--	--	--	--	--	--	--
MAY										
03...	--	--	--	--	--	--	--	--	--	--
24...	<10	<10	180	100	.8	<50	--	<10	290	3.2
JUN										
08...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	11	<10	690	540	<.2	<50	--	<10	30	3.3

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO JANUARY 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	19.0	20.0	13.0	11.0	11.5	8.5	8.0	8.0	5.5	4.5	5.0
2	20.5	18.5	19.5	13.5	10.5	11.5	8.0	7.0	7.0	5.0	4.5	4.5
3	20.5	18.0	19.5	13.0	10.5	11.5	8.0	6.5	7.0	4.5	4.5	4.5
4	21.5	19.5	20.5	13.0	10.0	11.0	8.0	6.5	7.0	5.0	4.5	4.5
5	21.0	19.0	20.5	12.0	9.5	10.5	8.5	6.5	7.0	5.0	4.5	4.5
6	21.0	19.5	20.0	12.0	9.5	11.0	7.0	6.5	7.0	4.5	4.5	4.5
7	20.0	19.5	20.0	12.0	10.5	11.0	7.0	6.5	6.5	4.5	4.5	4.5
8	19.5	18.5	19.5	11.0	9.0	10.0	6.5	5.5	6.0	4.5	4.0	4.5
9	19.0	18.0	18.5	11.5	9.0	10.5	7.0	5.5	6.0	4.5	4.0	4.5
10	19.0	16.0	18.0	12.0	10.0	11.0	7.0	5.5	6.0	4.5	3.5	4.0
11	19.0	16.0	18.0	11.0	9.5	10.0	6.5	6.0	6.5	4.0	3.5	3.5
12	19.0	15.5	18.0	11.0	9.0	10.0	6.5	6.0	6.0	4.0	3.5	4.0
13	19.0	15.5	18.0	10.0	8.5	9.0	6.5	5.5	6.0	4.0	3.5	3.5
14	19.5	16.0	18.0	9.5	8.5	9.0	6.5	6.0	6.0	4.0	3.0	3.5
15	19.5	16.0	18.0	9.5	9.0	9.5	6.5	6.0	6.0	3.5	3.0	3.0
16	18.0	16.0	17.0	10.0	8.0	9.0	6.5	6.0	6.5	3.5	3.0	3.0
17	18.0	15.5	16.5	10.0	8.5	9.5	7.0	6.0	6.5	4.0	3.0	3.5
18	17.0	14.5	16.0	10.0	8.0	9.0	7.0	6.0	6.5	4.0	3.0	3.5
19	16.5	15.0	16.0	10.0	8.5	9.5	7.0	6.0	6.5	4.0	3.5	3.5
20	16.5	16.5	16.5	10.0	9.0	9.5	6.5	6.0	6.5	---	---	---
21	16.5	14.5	16.0	9.0	8.0	8.5	6.5	5.5	6.0	---	---	---
22	15.0	12.0	13.5	9.0	7.0	8.5	6.0	5.5	5.5	---	---	---
23	14.5	13.0	14.0	9.0	6.5	8.0	6.5	5.0	5.5	---	---	---
24	15.0	13.0	14.5	9.5	8.0	8.5	6.0	5.0	5.5	---	---	---
25	15.0	14.5	15.0	9.5	7.0	8.5	5.5	5.0	5.5	---	---	---
26	15.0	14.0	14.5	9.5	9.0	9.5	6.0	5.0	5.5	---	---	---
27	14.5	13.5	14.0	10.0	8.5	9.5	6.0	5.0	5.5	4.5	3.0	3.5
28	14.0	12.0	13.5	9.0	6.5	8.0	6.0	5.0	5.5	4.0	3.5	4.0
29	14.5	11.5	13.0	8.5	7.0	8.0	6.5	5.5	6.0	4.0	3.5	3.5
30	13.0	12.0	12.0	8.5	8.0	8.0	6.5	5.0	5.5	---	---	---
31	13.0	12.0	12.0	---	---	---	6.0	5.0	5.5	---	---	---
MONTH	21.5	11.5	17.0	13.5	6.5	9.5	8.5	5.0	6.0	---	---	---

TENNESSEE RIVER BASIN

03580110 BOILING FORK CREEK NEAR DECHERD, TN

LOCATION.--Lat 35°09'44", long 86°03'37", Franklin County, Hydrologic Unit 06030003, on left bank at county road bridge, 0.4 mi (0.6 km) north of Goshen Church, 2.5 mi (4.0 km) southeast of Winchester, 2.2 mi (3.5 km) west of Cowan, and at mile 10.0 (16.1 km).

DRAINAGE AREA.--37.7 mi^2 (97.6 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1974 to January 1977 (discontinued).

INSTRUMENTATION.--Temperature recorder since Oct. 1, 1974.

REMARKS.--No record Dec. 17-20 (range in temperature 6.0 to 10.0°C), Jan. 17-31 (range in temperature 5.5 to 10.0°C).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 23.5°C July 24, 1975; minimum, 3.5°C Jan. 1, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, October to January, 16.5°C Oct. 4-7; minimum, 3.5°C Jan. 1.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1976 TO JANUARY 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.0	14.5	15.5	11.5	9.5	10.5	9.0	6.5	8.5	5.0	3.5	4.5
2	16.0	14.0	15.5	11.5	9.0	11.0	9.0	7.0	8.5	6.0	4.5	5.0
3	16.0	14.0	15.5	12.0	10.0	11.0	8.5	6.0	7.0	7.0	6.0	6.5
4	16.5	15.0	16.0	11.0	9.0	10.0	9.0	6.0	8.0	8.5	7.0	8.0
5	16.5	15.5	16.0	11.0	8.5	10.0	9.0	6.0	8.0	8.5	8.0	8.0
6	16.5	15.5	16.0	11.5	8.5	10.5	9.0	8.5	9.0	8.5	4.0	6.5
7	15.5	14.5	15.0	12.0	10.5	11.0	9.0	7.0	8.5	8.5	7.0	8.0
8	14.5	14.0	14.0	10.5	9.0	10.0	7.0	6.0	6.5	9.5	6.5	8.5
9	14.5	13.5	14.0	11.5	9.0	10.5	7.0	5.0	6.0	9.5	6.0	8.5
10	14.5	12.0	13.5	13.0	11.0	11.5	9.0	6.5	8.0	8.5	7.0	8.0
11	14.5	12.0	14.0	11.5	10.0	10.5	10.0	9.0	9.5	9.0	6.5	8.0
12	14.5	13.0	14.0	10.5	9.0	10.0	10.5	9.5	10.0	9.5	7.0	9.0
13	15.0	13.0	14.0	10.0	8.5	9.5	9.5	7.0	8.5	10.0	8.5	9.5
14	14.5	13.0	14.0	10.0	9.5	9.5	8.5	6.5	8.0	10.0	9.5	10.0
15	15.0	12.0	14.0	10.5	10.0	10.0	10.0	8.5	9.0	10.0	8.5	9.5
16	14.0	13.5	14.0	10.5	8.5	10.0	9.0	7.0	8.5	10.0	7.0	8.5
17	14.5	12.0	13.5	11.0	9.0	10.5	---	---	---	---	---	---
18	14.0	11.0	12.0	11.5	9.0	10.5	---	---	---	---	---	---
19	13.5	11.5	13.0	11.5	10.0	11.0	---	---	---	---	---	---
20	13.0	11.5	12.0	12.0	10.5	11.5	---	---	---	---	---	---
21	13.5	10.5	12.0	10.5	9.5	10.0	6.5	4.5	5.5	---	---	---
22	13.5	10.5	12.0	10.0	8.5	9.5	6.0	4.0	5.5	---	---	---
23	13.5	11.0	12.0	9.5	7.0	8.5	7.0	5.0	6.5	---	---	---
24	13.0	11.5	13.0	10.5	9.0	9.5	7.0	4.5	6.0	---	---	---
25	13.5	12.0	13.0	11.5	9.5	10.5	7.0	5.0	6.5	---	---	---
26	12.0	11.0	11.5	11.5	11.0	11.0	7.0	5.5	6.5	---	---	---
27	12.0	10.5	11.5	13.0	11.5	12.0	8.5	5.5	7.0	---	---	---
28	11.5	9.5	10.5	12.0	8.0	10.0	9.0	8.0	8.5	---	---	---
29	11.5	9.0	10.5	8.0	7.0	8.0	8.5	6.5	7.0	---	---	---
30	12.0	11.0	11.5	8.0	6.0	7.0	8.5	5.5	7.0	---	---	---
31	11.0	10.5	11.0	---	---	---	8.5	4.5	5.5	---	---	---
MONTH	16.5	9.0	13.5	13.0	6.0	10.0	10.5	4.0	7.5	---	---	---

03580750 ELK RIVER BELOW TIMS FORD DAM, TN

LOCATION.--Lat 35°11'32", long 86°16'52", Franklin County, Hydrologic Unit 06030003, on right bank 150 ft (50 m) upstream from bridge on State Highway 50, 0.3 mi (0.5 km) downstream from Tims Ford Dam, 3.6 mi (6.0 km) north of Lexie Crossroads, 9.5 mi (15.3 km) west of Winchester, and at mile 133 (214 km).

DRAINAGE AREA.--534 mi^2 (1,383 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES.--May 1971 to current year.

INSTRUMENTATION.--Temperature recorder since May 1971.

REMARKS.--No record Jan. 8 to Feb. 1; Aug. 11 to Sept. 30 (range in temperature 9.0 to 21.0°C).

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES (water years 1971-76): Maximum, 25.0°C June 24, 25, 1971, July 23, 1972; minimum, 3.5°C Feb. 19, 1972.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)
OCT												
14...	1320	3800	170	6.2	11.0	4	1	5.2	3	--	--	26
NOV												
15...	1020	3800	160	6.6	13.0	3	1	5.0	6	--	--	24
DEC												
01...	1410	3800	--	--	11.8	--	--	--	--	<1.0	<10	--
06...	0800	3800	160	7.6	11.0	2	2	6.4	4	--	--	24
JAN												
18...	0930	3800	160	6.8	7.0	5	<1	9.8	5	--	--	28
FEB												
14...	0800	3800	180	8.1	4.4	5	1	10.7	2	--	--	25
MAR												
14...	0800	3800	150	4.6	7.0	5	4	10.6	4	--	--	31
APR												
18...	0930	3900	150	7.7	9.8	9	4	7.8	1	--	--	--
MAY												
31...	1300	3800	160	7.4	11.0	4	6	4.5	3	--	--	--
JUN												
20...	0820	3800	150	7.7	11.5	8	3	3.7	2	--	--	28
JUL												
18...	0810	3800	170	7.3	12.0	5	2	2.2	4	--	--	--
AUG												
15...	0730	3800	170	7.2	12.2	6	4	1.4	1	--	--	--
SEP												
19...	0725	3800	160	6.8	12.4	5	2	.8	3	--	--	27

03580750 ELK RIVER BELOW TIMS FORD DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)
OCT												
14...	3.6	1.8	.9	56	46	6.0	5.0	<.1	2.8	100	.14	1030
NOV												
15...	4.1	1.7	.6	91	75	3.0	5.0	<.1	1.8	90	.12	923
DEC												
01...	--	--	--	--	--	--	--	--	--	--	--	--
06...	3.1	2.2	.6	93	76	3.0	4.0	<.1	1.4	90	.12	923
JAN												
18...	3.6	2.1	.7	80	66	9.0	4.0	<.1	1.4	70	.10	718
FEB												
14...	3.8	2.6	.8	88	72	--	--	<.1	--	--	--	--
MAR												
14...	3.2	2.0	.7	<1	<1	7.0	4.0	<.1	--	100	.14	1030
APR												
18...	--	--	--	88	72	--	--	--	--	--	--	--
MAY												
31...	--	--	--	82	67	--	--	--	--	--	--	--
JUN												
20...	3.8	2.8	1.0	82	67	8.0	5.0	<.1	--	110	.15	1130
JUL												
18...	--	--	--	83	68	--	--	--	--	--	--	--
AUG												
15...	--	--	--	83	68	--	--	--	--	--	--	--
SEP												
19...	4.1	2.3	.7	83	68	7.0	6.0	<.1	--	90	.12	923

DATE	TOTAL NONFILTRABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL ORGANIC NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL ALUMINUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYLLIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CADMIUM (CD) (UG/L)	TOTAL CHROMIUM (CR) (UG/L)
OCT												
14...	2	.34	.19	.11	.02	--	--	--	--	--	--	--
NOV												
15...	3	.03	.17	.09	.02	--	--	--	--	--	--	--
DEC												
01...	--	--	--	--	--	--	--	--	--	--	--	--
06...	<1	.05	.12	.08	.01	300	<2	<100	<10	10	<1	<5
JAN												
18...	<1	.14	.02	.11	.02	--	--	--	--	--	--	--
FEB												
14...	<1	.18	.02	.07	<.01	--	--	--	--	--	--	--
MAR												
14...	2	.15	.03	.13	.02	<200	--	<100	<10	--	<1	--
APR												
18...	--	.35	.11	.11	.02	--	--	--	--	--	--	--
MAY												
31...	--	.56	.02	.10	.03	--	--	--	--	--	--	--
JUN												
20...	3	.55	.04	.04	.01	<200	--	<100	<10	--	<1	--
JUL												
18...	--	.51	.07	.10	.01	--	--	--	--	--	--	--
AUG												
15...	--	.45	.10	.06	.01	--	--	--	--	--	--	--
SEP												
19...	2	.44	.20	.06	.03	<200	--	<100	<10	--	<1	--

03580750 ELK RIVER BELOW TIMS FORD DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT 14...	--	430	--	--	1100	--	--	--	--	--	--	--
NOV 15...	--	230	--	--	600	--	--	--	--	--	--	--
DEC 01...	--	--	--	--	--	--	--	--	--	--	--	--
06...	40	130	<10	<10	400	2.1	<50	1	<10	<1000	40	1.3
JAN 18...	--	120	--	--	50	--	--	--	--	--	--	--
FEB 14...	--	70	--	--	50	--	--	--	--	--	--	--
MAR 14...	30	280	16	<10	20	<.2	<50	--	<10	<1000	20	2.6
APR 18...	--	<50	--	--	80	--	--	--	--	--	--	--
MAY 31...	--	120	--	--	140	--	--	--	--	--	--	--
JUN 20...	10	70	<10	<10	240	<.8	<50	--	<10	<1000	50	2.4
JUL 18...	--	100	--	--	350	--	--	--	--	--	--	--
AUG 15...	--	150	--	--	530	--	--	--	--	--	--	--
SEP 19...	20	220	<10	<10	770	--	<50	--	<10	<1000	20	1.2

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.5	11.0	14.5	10.0	8.5	10.0	10.0	8.0	9.5	5.5	2.0	4.0
2	17.0	11.0	14.5	11.0	8.5	10.0	10.0	9.0	9.5	5.5	3.5	4.5
3	16.0	11.0	14.5	11.5	9.5	10.5	10.0	8.5	9.5	5.5	4.5	5.0
4	18.0	11.0	14.5	12.0	9.5	11.0	10.0	8.5	9.0	5.5	4.5	5.0
5	18.0	11.0	15.0	12.0	9.5	11.0	10.5	8.0	9.0	6.0	5.0	5.5
6	16.0	11.0	14.5	11.5	9.5	11.0	9.5	8.5	9.0	5.5	4.5	5.0
7	14.5	10.5	13.5	11.5	8.5	10.5	9.5	9.0	9.0	5.5	4.5	5.0
8	14.5	10.5	13.5	11.5	7.0	10.5	9.0	8.0	9.0	---	---	---
9	15.0	10.5	14.0	11.0	9.0	10.5	9.0	7.0	8.5	---	---	---
10	15.5	10.5	13.5	11.0	9.5	10.5	9.0	8.0	8.5	---	---	---
11	16.5	10.0	14.0	11.5	9.0	11.0	9.0	8.5	8.5	---	---	---
12	15.5	10.0	13.0	11.5	8.5	10.5	10.0	8.5	9.5	---	---	---
13	16.0	10.0	13.5	11.5	8.0	10.0	9.5	6.5	8.5	---	---	---
14	15.0	9.5	13.0	11.0	9.0	10.5	8.5	6.5	8.0	---	---	---
15	15.0	9.5	13.0	11.0	9.5	10.5	8.5	8.0	8.0	---	---	---
16	13.5	9.5	12.0	11.0	9.0	10.0	8.5	8.0	8.5	---	---	---
17	13.5	9.5	11.5	11.0	9.5	10.5	8.5	7.0	8.0	---	---	---
18	13.0	8.5	11.0	11.5	9.5	10.5	10.0	8.0	9.0	---	---	---
19	12.0	9.0	11.0	11.0	9.5	10.5	10.0	8.0	9.0	---	---	---
20	12.0	9.0	11.0	10.5	9.5	10.5	9.5	6.0	8.0	---	---	---
21	13.5	9.0	11.0	10.5	8.5	9.5	6.5	5.0	6.0	---	---	---
22	11.5	8.5	10.5	10.5	8.0	9.5	6.0	4.5	5.5	---	---	---
23	12.0	8.5	10.5	11.0	6.5	9.5	6.5	5.0	6.0	---	---	---
24	13.0	8.5	10.5	11.0	8.5	10.0	6.5	4.5	6.0	---	---	---
25	13.0	9.5	11.5	11.0	8.5	10.0	6.5	5.5	6.0	---	---	---
26	12.0	8.5	10.5	10.5	9.0	10.0	8.0	4.5	6.0	---	---	---
27	10.0	8.0	9.5	12.0	9.0	11.0	7.0	4.5	6.5	---	---	---
28	10.5	8.0	10.0	10.5	7.0	9.0	7.0	4.5	6.0	---	---	---
29	11.0	9.0	10.0	10.5	6.5	9.5	6.0	4.5	5.5	---	---	---
30	11.5	9.0	10.5	10.0	7.0	9.5	6.0	3.0	5.0	---	---	---
31	10.5	8.0	9.0	---	---	---	5.5	2.0	4.5	---	---	---
MONTH	18.0	8.0	12.0	12.0	6.5	10.5	10.5	2.0	7.5	---	---	---

03580750 ELK RIVER BELOW TIMS FORD DAM, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	10.5	6.5	8.5	10.5	7.0	9.0	9.5	8.0	8.5
2	6.0	1.5	4.5	11.0	6.5	8.5	15.0	10.5	12.0	11.5	8.0	9.0
3	6.0	3.0	5.0	9.5	8.5	9.0	13.5	11.0	12.0	14.5	9.0	11.0
4	7.0	3.5	5.5	10.5	9.0	10.0	15.0	13.0	14.0	15.0	9.0	11.0
5	8.0	3.0	5.0	10.5	8.5	9.5	13.5	6.5	10.0	12.0	8.5	10.0
6	7.0	3.0	4.5	9.5	8.0	9.0	8.0	6.5	7.0	16.0	9.0	11.5
7	4.5	1.5	3.5	8.0	5.5	6.0	8.5	8.0	8.0	17.0	11.5	14.0
8	5.0	1.5	4.0	7.0	5.0	5.5	8.5	8.0	8.5	16.0	12.0	13.5
9	5.0	2.0	4.0	8.0	5.5	6.0	9.0	8.5	8.5	13.5	8.5	11.0
10	6.5	2.0	5.0	9.0	5.0	6.0	9.0	8.5	9.0	14.5	9.0	11.0
11	6.5	3.0	4.5	11.0	9.0	10.0	9.5	8.0	9.0	14.5	9.0	11.0
12	8.0	5.5	6.5	13.5	10.0	11.5	9.0	8.5	8.5	14.5	9.0	11.5
13	9.0	5.0	6.5	12.0	9.5	10.5	9.0	8.5	9.0	15.0	9.0	11.0
14	7.0	2.0	5.0	9.5	5.5	6.0	9.0	8.5	9.0	15.0	11.0	13.0
15	5.0	3.0	4.0	6.0	5.0	5.5	9.5	9.0	9.5	16.5	10.5	13.5
16	4.5	1.5	4.0	6.5	6.0	6.0	9.5	9.0	9.5	16.0	8.5	12.0
17	6.0	1.5	4.5	6.5	6.0	6.5	10.0	9.0	9.5	15.0	8.5	11.5
18	9.5	4.0	6.5	7.0	6.0	6.0	10.5	8.0	9.5	16.0	8.5	12.0
19	9.0	5.5	7.0	8.0	6.0	6.5	10.5	8.0	9.5	12.0	8.5	10.5
20	9.0	5.5	6.5	8.5	6.5	7.0	10.5	8.0	10.0	17.0	8.5	12.0
21	6.0	3.0	5.0	9.0	6.0	7.0	11.0	8.0	10.0	16.0	11.5	13.5
22	9.5	4.0	6.5	8.5	6.5	7.0	12.0	9.0	11.0	14.0	11.5	13.0
23	9.0	6.5	8.0	8.0	6.0	6.5	16.0	10.5	13.0	16.0	9.0	11.0
24	10.0	8.0	8.5	8.5	6.5	7.0	15.0	11.5	13.5	15.5	8.5	11.5
25	10.5	8.0	9.0	8.5	6.5	7.0	13.5	8.0	10.5	15.0	9.0	11.5
26	11.5	8.0	9.5	9.0	6.0	7.0	11.5	8.5	10.5	16.5	9.0	12.0
27	10.5	8.0	9.0	13.0	9.0	11.0	12.0	8.0	10.5	14.5	9.0	11.0
28	10.5	6.5	8.5	12.0	10.0	11.0	12.0	8.0	10.5	15.5	9.0	11.5
29	---	---	---	13.0	10.0	11.5	12.0	8.5	10.5	12.0	9.0	10.5
30	---	---	---	15.5	11.0	13.5	---	8.5	10.0	12.0	9.0	10.0
31	---	---	---	11.0	7.0	9.5	---	---	---	16.0	9.0	11.0
MONTH	11.5	1.5	6.0	15.5	5.0	8.0	16.0	6.5	10.0	17.0	8.0	11.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.0	10.5	14.5	18.0	9.0	13.0	15.5	9.5	13.5			
2	18.5	10.5	13.5	13.0	9.0	10.0	14.5	9.0	13.0			
3	19.0	10.5	13.5	11.5	9.0	10.0	15.5	9.5	13.5			
4	13.5	10.0	11.5	18.5	8.5	12.0	15.0	9.5	13.0			
5	13.0	10.0	10.5	15.0	8.5	11.0	17.0	9.5	13.0			
6	15.5	9.5	13.5	18.0	9.0	11.5	10.5	10.0	10.0			
7	15.0	8.5	12.0	18.5	9.0	12.0	11.5	10.0	10.5			
8	15.5	8.5	11.0	18.0	8.5	12.0	17.0	9.0	13.5			
9	16.5	9.0	11.5	10.5	9.5	10.0	18.0	9.5	13.5			
10	16.0	8.5	11.5	12.0	9.0	10.5	17.0	9.0	12.0			
11	11.5	8.5	9.5	14.5	8.5	12.0	---	---	---			
12	11.5	8.0	9.0	17.0	8.5	13.0	---	---	---			
13	17.0	8.0	11.5	17.0	8.5	11.5	---	---	---			
14	13.5	8.0	11.0	18.0	8.5	13.0	---	---	---			
15	14.5	8.0	11.5	16.5	8.5	11.0	---	---	---			
16	15.5	8.0	11.5	10.5	9.0	9.5	---	---	---			
17	15.0	8.0	11.5	11.5	9.0	10.0	---	---	---			
18	12.0	8.5	11.0	15.0	8.5	12.0	---	---	---			
19	12.0	8.5	10.0	14.0	8.5	12.0	---	---	---			
20	16.0	8.0	11.5	15.0	8.5	13.0	---	---	---			
21	17.0	8.5	12.0	16.0	9.0	13.0	---	---	---			
22	18.0	8.0	13.0	14.5	8.5	11.0	---	---	---			
23	17.0	8.5	13.0	10.0	9.0	9.5	---	---	---			
24	17.0	8.5	12.0	13.0	9.0	10.5	---	---	---			
25	13.0	9.0	11.0	15.0	9.0	12.0	---	---	---			
26	13.0	9.0	10.5	15.5	9.0	13.0	---	---	---			
27	18.0	8.5	13.0	16.5	9.0	13.0	---	---	---			
28	18.5	8.5	13.0	14.5	9.0	13.0	---	---	---			
29	16.0	8.5	13.0	13.5	9.0	11.0	---	---	---			
30	18.0	9.0	13.0	10.5	9.5	10.0	---	---	---			
31	---	---	---	13.0	9.5	11.0	---	---	---			
MONTH	19.0	8.0	12.0	18.5	8.5	11.5	---	---	---			
YEAR	19.0	1.5	10.0									

03580990 JACK DANIEL SPRING AT LYNCHBURG, TN

LOCATION.--Lat 35°17'01", long 86°21'58", Moore County, Hydrologic Unit 06030003, at mouth of Jack Daniel Cave at Jack Daniel Distillery, 0.5 mi (0.8 km) east of Lynchburg.

PERIOD OF RECORD.--April 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 805.35 ft (245.471 m) above mean sea level (Tennessee Valley Authority bench mark).

REMARKS.--Records good. Recording rain gages located at station.

AVERAGE DISCHARGE.--7 years, 2.55 ft^3/s (0.072 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft^3/s (5.21 m^3/s) Mar. 16, 1973, gage height, 3.69 ft (1.125 m); no flow for part of Sept. 12, 1971, Dec. 6, 7, 1976, caused by drainage of reservoir; minimum discharge unaffected by regulation, 0.45 ft^3/s (0.013 m^3/s) several days in September and October 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 10 ft^3/s (0.283 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	1415	17	0.48	2.05	0.625	Mar. 12	1730	52	1.47	2.79	0.850
Feb. 24	0415	12	0.34	1.85	0.564	Apr. 4	1445	*107	3.03	3.20	0.975
Mar. 4	1015	52	1.47	2.79	0.850						

Minimum discharge, 0.50 ft^3/s (0.014 m^3/s) Sept. 14, gage height, 1.27 ft (0.387 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	2.4	1.6	1.4	1.7	4.6	2.3	1.6	.94	.77	.60	.55
2	.77	2.2	1.5	1.4	1.5	3.9	2.5	1.6	.94	.77	.60	.55
3	.76	2.1	1.5	1.4	1.5	3.7	6.4	1.5	.94	.76	.60	.55
4	.71	1.9	1.4	1.4	1.5	28	71	1.5	.94	.71	.60	.55
5	.71	1.8	1.4	1.5	1.5	12	38	1.5	.92	.71	.60	.55
6	.71	1.6	1.3	2.3	1.3	7.8	12	1.4	.93	.74	.60	.55
7	.72	1.5	1.3	4.2	1.2	5.8	8.0	1.4	.88	.76	.60	1.0
8	.71	1.4	1.3	3.8	1.2	4.8	6.0	1.5	.88	.71	.60	.92
9	.76	1.3	1.2	4.2	1.2	4.2	4.9	1.5	.88	.71	.57	.71
10	.76	1.3	1.2	5.4	1.2	3.8	4.2	1.4	.82	.70	.57	.65
11	.71	1.1	1.4	4.3	1.2	3.5	3.7	1.4	.85	.71	.65	.62
12	.71	1.1	1.9	3.6	1.3	21	3.3	1.3	.87	.71	.60	.60
13	.71	1.0	1.9	3.3	1.4	16	3.2	1.3	.82	.71	.60	.60
14	.70	.97	1.9	3.3	1.3	8.7	2.9	1.2	.82	.69	.64	.70
15	.67	.94	1.9	3.4	1.3	6.2	2.7	1.2	.82	.65	.65	1.4
16	.66	.94	1.9	3.1	1.2	4.8	2.4	1.2	.82	.65	.69	.99
17	.65	.90	1.8	2.8	1.2	4.3	2.2	1.2	.90	.65	.92	.93
18	.65	.88	1.6	2.7	1.2	3.9	2.1	1.2	.96	.65	.78	.84
19	.65	.88	1.5	2.5	1.2	3.4	1.9	1.2	.88	.65	.66	.96
20	.70	.88	1.5	2.3	1.2	3.1	1.8	1.1	.88	.65	.65	1.1
21	.71	.88	1.4	2.1	1.2	2.8	1.7	1.1	.88	.65	.60	.88
22	.65	.84	1.4	1.9	1.2	2.6	1.6	1.1	.82	.65	.60	.81
23	.65	.82	1.4	1.8	1.5	2.4	1.9	1.1	.82	.65	.60	.77
24	1.1	.82	1.3	1.8	9.7	2.3	2.2	1.1	.82	.67	.60	.77
25	8.9	.82	1.3	1.8	5.4	2.1	2.1	1.1	.78	.65	.60	1.3
26	5.6	.86	1.5	1.7	4.2	1.9	2.1	1.1	.91	.65	.60	2.0
27	3.5	1.0	1.5	2.1	6.0	1.9	1.9	1.1	.84	.65	.63	1.5
28	2.8	1.6	1.6	2.2	5.6	1.9	1.8	1.1	.82	.64	.60	1.3
29	2.5	1.7	1.5	2.0	---	1.9	1.8	1.0	.82	.62	.60	1.2
30	2.4	1.6	1.5	1.9	---	2.1	1.8	1.0	.77	.65	.55	1.2
31	2.6	---	1.5	1.8	---	2.3	---	.95	---	.65	.55	---
TOTAL	45.65	38.03	46.9	79.4	61.1	177.7	200.4	38.95	25.97	21.19	19.31	27.05
MEAN	1.47	1.27	1.51	2.56	2.18	5.73	6.68	1.26	.87	.68	.62	.90
MAX	8.9	2.4	1.9	5.4	9.7	28	71	1.6	.96	.77	.92	2.0
MIN	.65	.82	1.2	1.4	1.2	1.9	1.6	.95	.77	.62	.55	.55

CAL YR 1976 TOTAL 703.64 MEAN 1.92 MAX 10 MIN .65
WTR YR 1977 TOTAL 781.65 MEAN 2.14 MAX 71 MIN .55

03582000 ELK RIVER ABOVE FAYETTEVILLE, TN

LOCATION.--Lat 35°08'04", long 86°32'23", Lincoln County, Hydrologic Unit 06030003, on right bank 100 ft (30 m) downstream from highway bridge, 1.8 mi (2.9 km) southeast of Fayetteville, 4.0 mi (6.4 km) upstream from Norris Creek, and at mile 93.9 (151.1 km).

DRAINAGE AREA.--827 mi^2 (2,142 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 650.58 ft (198.297 m) above mean sea level.

REMARKS.--Records good. Prior to August 1949, diurnal fluctuation at low flow caused by powerplants upstream. Flow regulated by Woods Reservoir since 1952 (see station 03579000), and Tims Ford Lake since December 1970 (see station 03580740).

AVERAGE DISCHARGE.--43 years, 1,446 ft^3/s (40.95 m^3/s), 23.74 in/yr (603 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,600 ft^3/s (1,180 m^3/s) Mar. 16, 1973, gage height, 28.63 ft (8.726 m); minimum, 67 ft^3/s (1.90 m^3/s) Dec. 9, 10, 11, 1970, gage height, 0.75 ft (0.229 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1842 reached a stage of 27.5 ft (8.38 m), discharge, 37,000 ft^3/s (1,050 m^3/s), and flood of Mar. 23, 1929, reached a stage of 27.2 ft (8.29 m), discharge, 36,000 ft^3/s (1,020 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,100 ft^3/s (739 m^3/s) at 2200 hours Apr. 4, gage height, 24.27 ft (7.397 m); minimum, 134 ft^3/s (3.80 m^3/s) July 3, gage height, 1.00 ft (0.305 m); minimum daily, 164 ft^3/s (4.64 m^3/s) July 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	579	2560	2190	1170	1640	1000	1330	479	1130	479	188	423
2	516	2620	2770	403	2430	744	1060	467	755	479	438	446
3	500	2860	2760	579	901	744	2140	1040	755	164	446	450
4	462	2830	2700	973	769	10300	15600	1250	755	183	446	198
5	475	2810	1250	1140	561	5340	18700	1390	203	438	454	183
6	495	2780	587	2040	250	2010	5980	2170	230	1030	446	438
7	539	1450	2180	2650	510	1870	6600	1230	516	898	195	903
8	520	1420	2040	1980	1130	3090	7270	755	587	673	178	1160
9	508	1800	2110	2690	1080	2880	7030	442	587	750	431	338
10	520	1690	2220	3360	1070	2870	6920	1800	615	185	446	547
11	512	1800	1680	3150	828	2440	6900	1540	619	178	462	240
12	500	1790	1710	3330	636	6550	5060	1530	180	446	434	198
13	483	1780	963	2890	365	9040	4090	1510	223	434	446	479
14	467	1750	1820	2150	545	2410	4040	1190	479	523	210	780
15	462	1620	1940	2000	982	4360	3980	305	495	471	198	2370
16	471	1780	2450	825	1160	4240	3950	230	500	555	483	998
17	458	1780	1940	2220	1150	4060	3920	765	504	188	943	1870
18	523	1870	1600	1760	912	4000	2790	678	619	210	943	587
19	998	1780	341	2340	402	3910	2700	547	228	454	559	571
20	1360	1820	673	1660	216	3240	2540	795	208	450	523	1120
21	1290	849	2740	1300	473	2680	2400	523	495	434	175	953
22	1380	240	2610	516	933	2640	2290	210	500	462	218	697
23	968	475	1990	314	535	2730	1040	188	491	467	462	654
24	1000	454	1630	535	4160	2700	1060	1160	483	208	475	607
25	6130	392	1430	1110	1680	2670	1210	1230	692	188	471	1180
26	4950	140	800	1170	1000	2280	1750	1260	264	415	454	1780
27	2430	571	815	2040	1990	1850	1670	1250	230	458	462	988
28	2930	730	1150	2610	1450	434	1630	1250	479	434	213	1760
29	2810	1400	1230	2860	---	445	1600	815	462	458	195	1480
30	2800	2280	1400	2690	---	617	1080	235	462	462	462	1200
31	1310	---	1780	2620	---	890	---	215	---	210	462	---
TOTAL	39346	48121	53499	57075	29758	95034	128330	28449	14746	13384	12918	25598
MEAN	1269	1604	1726	1841	1063	3066	4278	918	492	432	417	853
MAX	6130	2860	2770	3360	4160	10300	18700	2170	1130	1030	943	2370
MIN	458	140	341	314	216	434	1040	188	180	164	175	183

CAL YR 1976 TOTAL 421595 MEAN 1152 MAX 6130 MIN 125 MEAN‡ 1129 CFSM‡ 1.37 IN‡ 18.58
WTR YR 1977 TOTAL 546258 MEAN 1497 MAX 18700 MIN 140 MEAN‡ 1514 CFSM‡ 1.83 IN‡ 24.86

‡ Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

03582000 ELK RIVER ABOVE FAYETTEVILLE, TN

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to September 1977.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	FECAL COLIFORM (COL. PER 100 ML)
OCT										
05...	1545	364	215	--	16.5	--	--	--	--	--
26...	1245	3730	230	7.9	17.0	8	19	10	--	--
29...	0955	3430	--	--	13.9	--	--	--	1.4	200
NOV										
23...	0935	349	200	7.9	12.0	3	3	5	--	--
DEC										
28...	0900	770	220	7.7	10.0	8	3	2	--	--
JAN										
24...	1005	380	240	7.3	11.0	5	2	2	--	--
FEB										
01...	1415	665	220	--	4.0	--	--	--	--	--
MAR										
02...	1445	719	360	--	9.5	--	--	--	--	--
APR										
26...	1115	845	200	7.8	17.0	1	1	9	--	--
MAY										
02...	1145	438	260	--	19.0	--	--	--	--	--
JUN										
07...	1520	273	205	--	23.0	--	--	--	--	--
JUL										
25...	0950	158	180	7.4	25.0	10	<1	2	--	--
AUG										
17...	1600	767	160	--	20.5	--	--	--	--	--
SEP										
14...	1130	531	170	7.8	25.0	6	3	3	--	--

DATE	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	134	110	4.0	2.0	<.1	5.6
29...	--	--	--	--	--	--	--	--	--	--
NOV										
23...	30	4.9	2.8	.5	113	93	8.0	4.0	<.1	3.6
DEC										
28...	36	4.6	2.0	.9	100	82	10	3.0	<.1	2.7
JAN										
24...	44	5.0	1.6	.7	134	110	9.0	5.0	<.1	3.8
FEB										
01...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
APR										
26...	36	4.2	2.0	.8	106	87	9.0	4.0	<.1	--
MAY										
02...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
25...	34	4.0	2.0	1.0	94	77	9.0	6.0	<.1	--
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
14...	33	4.2	1.8	1.1	98	80	6.0	5.0	<.1	--

03582000 ELK RIVER ABOVE FAYETTEVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
26...	130	.18	1310	24	.89	.06	.24	.23	.13	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
23...	120	.16	113	1	.51	.01	.11	.03	.03	200
DEC										
28...	110	.15	229	2	.40	.02	.06	.06	.04	--
JAN										
24...	140	.19	144	2	.84	.03	.05	.05	.08	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
APR										
26...	120	.16	274	<1	.58	.05	.14	.05	--	400
MAY										
02...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
25...	90	.12	38.4	<1	.41	.02	.10	.03	--	200
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
14...	120	.16	172	3	.75	.03	.07	.06	--	400

DATE	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
23...	<2	<100	<10	70	<1	<5	<10	200	<50	<10
DEC										
28...	--	--	--	--	--	--	--	240	<50	--
JAN										
24...	--	--	--	--	--	--	--	130	<50	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
APR										
26...	<2	<100	<10	100	<1	<5	30	160	<50	<10
MAY										
02...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
25...	<2	<100	<10	90	<1	<5	20	300	<50	<10
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
14...	<2	<100	<10	30	<1	<5	20	160	--	<10

03582000 ELK RIVER ABOVE FAYETTEVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
23...	<10	60	30	.2	<50	1	<10	<1000	<10	1.5
DEC										
28...	--	80	40	--	--	--	--	--	--	--
JAN										
24...	--	30	30	--	--	--	--	--	--	--
FEB										
01...	--	--	--	--	--	--	--	--	--	--
MAR										
02...	--	--	--	--	--	--	--	--	--	--
APR										
26...	<10	70	20	.5	<50	<1	<10	<1000	30	1.4
MAY										
02...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
JUL										
25...	<10	50	20	<.2	<50	<1	<10	<1000	90	1.4
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
14...	<10	40	--	.2	<50	<2	<10	<1000	150	2.1

03582140 UNION BRANCH BELOW BELLEVILLE, TN

LOCATION.--Lat 35°15'48", long 86°34'22", Lincoln County, Hydrologic Unit 06030003, at center of upstream bridge opening on private drive, 1.7 mi (2.7 km) southwest of Belleville, 8.4 mi (13.5 km) north of Fayetteville.

DRAINAGE AREA.--2.37 mi^2 (6.14 km^2).

PERIOD OF RECORD.--October 1976 to September 1977 (discontinued).

GAGE.--Water-stage recorder.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 250 ft^3/s (7.08 m^3/s) at 1105 April 4, gage height 6.36 ft, (1.939 m); no flow for part or all of each day many days each month.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.6	.00	.00	.00	1.2	.00	.22	.00	.01	.00	.00
2	.00	.05	.00	.00	.00	.90	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.10	.00	3.4	2.2	.08	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	80	86	.13	.00	.00	.00	.00
5	.00	.00	.00	.20	.00	7.5	33	.00	.00	.00	.00	.00
6	.04	.00	.00	.50	.00	1.8	12	.00	.00	.00	.00	.01
7	.00	.00	.00	3.4	.00	5.6	4.8	.00	.00	.00	.00	.13
8	.01	.00	.00	2.0	.00	2.0	.72	.00	.00	.00	.00	.00
9	.01	.00	.00	1.0	.00	.00	.00	.00	.00	.04	.00	.00
10	.00	.00	.00	6.0	.00	.00	.00	.00	.00	.00	.50	.00
11	.00	.00	.08	3.8	.00	.00	.00	.00	.00	.05	.00	.00
12	.00	.00	2.8	1.6	.00	33	.00	.00	.00	.00	.00	.00
13	.00	.00	.30	.80	.00	32	.00	.00	.03	.00	.00	.01
14	.00	.00	.00	3.5	.00	13	.00	.00	.00	.00	.10	.55
15	.00	.01	.00	2.0	.00	6.0	.00	.00	.00	.00	.00	.70
16	.00	.00	.00	1.1	.00	.65	.00	.00	.00	.00	.00	.05
17	.00	.00	.00	1.0	.00	.00	.00	.00	.70	1.0	.25	.00
18	.00	.00	.00	.80	.00	.00	.00	.00	.04	.50	.00	.00
19	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00
20	.02	.00	.00	.10	.00	.00	.00	.00	.01	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	5.8	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.32	.00	40	.00	.00	.00	.00	.00
24	6.8	.00	.00	1.5	17	.00	24	.00	.00	.00	.00	.00
25	62	.00	.35	.00	6.8	.00	12	.03	.02	.00	.00	1.6
26	12	.02	.05	.00	3.0	.00	6.0	.00	1.0	.00	.00	1.6
27	3.0	.01	.00	1.5	4.4	.00	1.0	.00	.00	.00	.00	.16
28	.03	.70	.00	.00	1.8	.00	.00	.00	.00	.00	.00	.00
29	.00	.16	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	5.0	.02	.01	.00	---	.00	.28	.00	.00	.00	.00	.00
31	7.2	---	1.8	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	96.11	2.57	5.39	31.10	33.32	187.05	227.80	.48	1.80	1.60	.85	4.81
MEAN	3.10	.086	.17	1.00	1.19	6.03	7.59	.015	.060	.052	.027	.16
MAX	62	1.6	2.8	6.0	17	80	86	.22	1.0	1.0	.50	1.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
CFSM	1.31	.04	.07	.42	.50	2.54	3.20	.01	.03	.02	.01	.07
IN.	1.51	.04	.08	.49	.52	2.94	3.57	.01	.03	.02	.01	.08

WTR YR 1977 TOTAL 592.88 MEAN 1.62 MAX 86 MIN .00

03582400 ELK RIVER AT FAYETTEVILLE, TN

LOCATION.--Lat 35°08'32", long 86°34'10", Lincoln County, Hydrologic Unit 06030003, on right bank of U. S. Highway 231 and 431 bridge at Fayetteville, and at mile 89.8 (144.5 km).

DRAINAGE AREA.--895 mi^2 (2,318 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1975 to current year.

INSTRUMENTATION.--Temperature recorder since Oct. 1, 1975.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C July 17, 1977; minimum, 0.0°C several days in winter months 1976-77.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.0°C July 17; minimum, 0.0°C several days in winter months.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.5	14.0	14.5	11.5	9.0	10.5	8.0	3.0	5.0	4.5	0.0	1.5
2	15.5	14.0	14.5	10.0	8.0	9.0	7.0	4.5	6.0	4.0	0.0	2.0
3	15.0	14.0	14.5	10.0	8.0	9.0	9.0	4.0	6.0	4.5	3.5	4.0
4	15.5	14.5	15.0	10.0	6.5	8.5	9.5	4.0	6.0	6.0	4.0	5.0
5	15.5	15.0	15.0	10.0	6.0	8.5	9.0	4.0	6.5	6.5	5.0	6.0
6	16.0	14.5	15.0	10.0	7.0	8.5	8.5	5.5	6.5	5.5	3.0	4.5
7	14.5	13.5	14.0	10.0	7.0	9.0	8.5	4.5	6.0	4.5	1.5	4.0
8	13.5	13.0	13.0	10.0	5.5	8.0	6.5	2.0	5.0	5.0	0.5	3.5
9	13.0	12.0	12.0	10.5	6.5	9.0	8.5	2.0	6.0	6.0	4.0	5.5
10	13.0	11.0	12.0	10.5	8.0	9.5	9.0	5.0	7.0	5.5	0.0	1.5
11	13.0	11.0	12.0	10.0	5.5	8.0	8.5	5.5	7.0	5.5	0.5	4.0
12	13.5	11.5	13.0	10.0	5.5	8.5	9.0	6.0	8.5	7.0	3.0	5.5
13	14.0	12.0	13.0	10.5	6.0	9.0	8.5	4.5	6.5	8.0	3.5	6.5
14	14.0	13.0	13.5	10.0	8.0	9.0	8.0	3.5	6.0	8.5	6.5	8.0
15	14.0	12.0	13.0	10.5	6.0	8.0	9.0	5.5	7.0	8.5	5.0	6.5
16	13.5	12.0	13.0	10.0	6.0	8.5	8.5	4.0	6.5	5.5	0.0	3.0
17	12.0	10.5	12.0	10.5	6.0	8.5	8.5	4.0	6.0	6.5	1.5	5.0
18	12.0	9.5	11.0	10.0	5.5	8.5	8.5	3.5	6.0	6.5	1.5	5.0
19	11.5	10.5	11.0	10.0	8.0	9.0	8.5	5.0	7.0	5.5	1.5	4.5
20	11.0	10.0	10.5	10.5	6.5	9.0	8.5	2.0	5.5	6.5	3.0	5.5
21	11.0	9.5	10.5	10.5	6.0	8.5	8.0	0.0	3.5	6.0	1.5	4.0
22	11.0	9.0	10.0	8.0	3.0	5.5	6.5	0.0	4.5	5.0	0.5	3.5
23	11.0	9.5	10.5	8.0	2.0	6.0	6.0	1.5	3.5	6.5	0.5	4.0
24	13.5	11.0	12.0	8.0	3.0	5.5	6.5	0.0	4.5	6.0	5.0	5.5
25	14.0	13.5	14.0	8.0	3.0	6.5	6.0	4.0	5.5	7.0	1.5	3.5
26	13.5	11.0	13.0	10.0	6.0	8.5	6.0	1.5	3.5	7.0	1.0	4.5
27	11.5	10.5	11.0	10.0	8.5	9.5	6.5	1.5	5.0	8.5	3.0	5.0
28	11.0	9.0	10.0	9.0	3.5	6.5	6.5	3.0	5.5	7.0	1.0	4.0
29	11.0	8.5	10.0	4.5	0.5	3.0	7.0	1.0	4.0	6.5	0.0	2.0
30	11.5	9.5	11.0	7.0	0.5	4.5	6.0	0.0	4.0	6.5	0.0	4.0
31	12.0	9.5	11.0	---	---	---	---	---	---	6.5	0.0	2.0
MONTH	16.0	8.5	12.5	11.5	0.5	8.0	9.5	0.0	5.5	8.5	0.0	4.5

03582400 ELK RIVER AT FAYETTEVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	6.0	0.0	1.5	10.5	8.0	9.0	16.0	11.0	13.5	16.0	14.0	15.0
2	6.5	0.0	1.5	10.5	6.0	9.0	15.5	10.5	13.0	18.5	16.0	17.0
3	5.5	0.5	3.5	10.5	9.5	10.0	14.5	13.0	13.5	18.0	15.5	16.5
4	6.0	2.0	1.5	12.0	10.0	11.0	15.0	13.0	14.0	15.5	14.0	15.0
5	6.5	1.0	3.5	11.5	9.5	10.5	14.0	9.5	12.0	15.5	13.5	14.5
6	6.5	0.0	1.5	11.0	8.5	10.0	11.0	8.5	9.5	15.5	13.0	14.0
7	6.0	0.0	1.5	10.5	7.0	9.5	10.5	8.0	9.5	16.5	14.5	15.0
8	6.5	0.0	3.0	10.0	5.5	8.5	10.5	10.0	10.5	18.5	15.5	17.0
9	6.5	1.0	3.5	10.0	6.5	8.5	10.5	9.5	10.0	18.5	17.0	18.0
10	6.5	0.0	3.5	10.5	8.5	9.5	11.0	10.0	10.5	18.0	13.5	15.5
11	6.5	1.0	4.0	11.5	9.5	10.0	11.0	10.5	11.0	14.5	12.0	13.5
12	8.0	4.5	6.0	14.5	11.5	13.5	11.5	10.5	11.0	15.0	13.0	14.0
13	8.0	4.5	6.0	13.5	12.0	13.0	11.0	10.5	10.5	15.5	13.0	14.0
14	8.5	4.5	6.5	13.5	10.5	12.0	11.0	10.5	11.0	15.5	14.0	14.5
15	7.0	3.0	4.0	13.5	9.5	10.5	11.0	11.0	11.0	17.0	15.0	16.5
16	6.0	0.5	3.0	10.0	9.0	9.5	11.5	11.0	11.0	19.5	16.5	18.0
17	6.5	0.0	3.0	9.5	8.5	9.0	11.5	11.0	11.0	19.5	18.0	19.0
18	8.0	4.5	6.0	10.0	9.0	9.5	13.0	11.0	12.0	18.0	16.5	17.0
19	8.5	5.5	7.0	10.0	8.5	9.0	13.0	11.0	12.0	18.5	17.0	18.0
20	8.5	3.0	5.5	10.0	8.0	9.0	13.5	11.0	12.0	18.5	17.0	18.0
21	8.5	1.5	5.0	9.5	8.5	9.0	12.0	11.0	11.5	19.5	16.5	18.0
22	9.0	6.0	8.0	10.0	7.0	9.0	14.5	11.0	13.0	20.0	19.0	19.5
23	10.5	8.5	9.5	9.5	6.0	8.5	16.0	14.0	15.0	20.5	19.0	20.0
24	11.0	9.0	10.0	10.0	6.5	9.0	15.5	14.0	15.0	20.0	16.0	18.0
25	12.0	9.5	11.0	10.0	7.0	9.5	14.5	11.0	14.0	17.0	15.0	16.0
26	14.0	11.5	13.0	11.0	8.5	10.0	13.0	10.0	11.5	16.5	15.0	15.5
27	13.5	9.0	11.0	11.5	9.5	11.0	13.0	10.0	11.5	17.0	15.0	15.5
28	11.0	7.0	9.5	14.0	11.5	13.0	14.0	11.0	13.0	16.5	15.0	15.5
29	---	---	---	15.0	13.0	14.0	14.0	11.5	13.0	18.5	15.0	16.5
30	---	---	---	17.0	15.0	16.0	14.0	11.5	13.0	20.5	18.0	19.5
31	---	---	---	17.0	15.5	16.0	---	---	---	22.0	20.0	21.5
MONTH	14.0	0.0	5.5	17.0	5.5	10.5	16.0	8.0	12.0	22.0	12.0	16.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	15.5	18.0	23.5	22.0	23.0	24.0	21.5	23.0	23.0	21.5	22.0
2	19.5	18.0	18.5	22.0	22.0	22.0	24.5	21.0	23.0	22.0	21.0	21.5
3	19.0	17.0	18.5	26.0	21.0	23.0	23.5	22.0	23.0	21.5	21.0	21.0
4	19.5	17.0	18.5	25.5	21.0	23.5	23.0	21.5	22.0	24.5	21.0	22.0
5	21.0	18.0	19.5	25.0	22.0	24.5	22.0	21.0	21.5	24.0	21.0	23.0
6	22.0	19.5	21.0	24.5	19.0	20.5	23.0	21.5	22.0	23.0	21.5	22.0
7	22.0	21.0	21.5	24.5	19.0	19.5	25.0	22.0	24.0	21.5	19.5	20.5
8	21.0	18.5	19.5	23.0	19.5	20.0	26.0	23.0	24.5	21.5	19.5	20.5
9	19.5	16.5	19.0	23.0	20.0	20.5	25.0	23.5	24.5	22.0	21.0	21.5
10	19.5	18.5	19.0	23.5	20.5	22.0	24.5	23.0	23.5	23.0	21.5	22.0
11	20.0	18.5	19.0	24.5	21.0	23.0	24.0	23.0	23.5	22.0	19.0	21.5
12	25.0	19.5	21.5	25.0	23.0	24.0	23.5	23.0	23.5	21.5	18.0	20.5
13	24.0	21.0	22.0	24.5	23.5	24.0	24.0	23.0	23.5	21.5	20.5	21.0
14	23.0	22.0	23.0	24.0	23.0	23.5	24.5	23.0	24.0	21.0	20.0	20.5
15	23.0	20.5	22.0	24.0	22.0	23.0	24.5	23.0	24.0	20.5	19.5	20.0
16	20.5	20.0	20.0	23.5	22.0	23.0	25.0	22.0	24.0	21.0	20.0	20.5
17	20.5	20.0	20.5	28.0	22.0	24.5	22.0	20.0	21.0	20.5	19.5	20.0
18	21.0	20.0	20.5	24.5	23.0	24.0	22.0	20.0	21.0	21.0	19.5	20.5
19	23.5	20.5	22.0	24.5	23.5	24.0	22.0	20.5	21.5	21.5	20.5	21.0
20	24.5	22.0	23.5	24.0	23.0	23.5	25.5	20.0	21.0	20.5	19.5	20.0
21	24.5	23.0	24.0	23.5	23.0	23.0	26.5	21.5	23.0	20.0	18.5	19.5
22	24.0	23.0	23.5	23.0	22.0	23.0	23.5	22.0	23.0	20.0	18.0	19.0
23	23.0	22.0	22.0	23.0	21.5	22.0	24.0	23.0	23.5	19.5	18.5	19.0
24	23.0	21.5	22.0	24.0	22.0	23.5	23.5	21.5	22.0	19.5	19.0	19.0
25	23.0	20.5	22.0	25.0	23.5	24.0	23.0	21.5	22.0	20.0	19.0	19.5
26	22.0	20.5	21.5	25.0	21.0	24.0	23.0	21.5	22.0	19.5	19.5	19.5
27	24.0	21.5	23.0	23.5	22.0	23.0	24.5	22.0	23.0	20.0	18.0	19.5
28	25.0	23.5	24.0	22.0	21.0	21.5	25.5	22.0	23.5	18.5	16.0	17.0
29	24.5	23.0	24.0	21.5	20.5	21.0	25.5	23.5	24.0	17.0	16.0	16.5
30	23.5	23.0	23.0	21.5	20.5	21.0	24.5	23.0	24.0	17.0	16.0	16.5
31	---	---	---	23.5	21.0	22.0	23.5	22.0	23.0	---	---	---
MONTH	25.0	15.5	21.0	28.0	19.0	22.5	26.5	20.0	23.0	24.5	16.0	20.0
YEAR	28.0	0.0	13.5									

03584500 ELK RIVER NEAR PROSPECT, TN

LOCATION.--Lat 35°01'39", long 86°56'52", Giles County, Hydrologic Unit 06030004, on right bank 50 ft (15 m) upstream from county road bridge, 1.1 mi (1.8 km) downstream from Richland Creek, 3.2 mi (5.1 km) east of Prospect, 5.4 mi (8.7 km) upstream from Ford Creek, 7.9 mi (12.7 km) upstream from Tennessee - Alabama State line, and at mile 41.5 (66.8 km).

DRAINAGE AREA.--1,784 mi^2 (4,621 km^2).

PERIOD OF RECORD.--July 1904 to February 1908, January 1919 to current year. Published as "near Elkmont, Ala." 1904-8, 1919-34. Record for both sites published January to March 1934.

REVISED RECORDS.--WSP 523: 1904-8, 1919-20. WSP 823: Drainage area. WSP 1436: 1920-22, 1923(M), 1924, 1927, 1929, 1931-32(M).

GAGE.--Water-stage recorder. Datum of gage is 563.29 ft (171.691 m) above mean sea level. July 1, 1904, to Feb. 2, 1908, and Jan. 20, 1919, to Mar. 31, 1934, nonrecording gage 11.9 mi (19.1 km) downstream at datum 13.52 ft (4.121 m) lower.

REMARKS.--Records good. Flow regulated by Woods Reservoir (station 03579000) since May 1952, and Tims Ford Lake (station 03580740) since December 1970. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--61 years (1905-7, 1920-77), 3,072 ft^3/s (87.00 m^3/s), 23.38 in/yr (594 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft^3/s (3,310 m^3/s) Mar. 17, 1973, gage height, 40.12 ft (12.229 m), from rating curve extended above 63,000 ft^3/s (1,780 m^3/s) on basis of slope-area measurement at gage height 38.17 ft (11.634 m) and contracted-opening measurement at gage height 38.96 ft (11.875 m); minimum, 78 ft^3/s (2.21 m^3/s) Sept. 29, 1961 (caused by highway construction upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage of 40.9 ft (12.47 m), discharge, 130,000 ft^3/s (3,680 m^3/s), and may have been equaled by a flood in March 1897, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,100 ft^3/s (1,220 m^3/s), at 2300 hours Apr. 5, gage height, 31.30 ft (9.540 m); minimum, 185 ft^3/s (5.24 m^3/s) Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	4700	3410	2970	3190	4660	2050	2220	524	637	282	425
2	964	4510	3560	1920	2800	3540	2280	1820	1330	671	226	382
3	805	4190	3740	1520	2650	3410	4230	1800	1060	708	365	395
4	713	4150	3620	1830	1640	24800	21200	1970	1030	419	425	394
5	623	3920	3180	2210	1530	36900	37300	2220	1020	280	435	244
6	1080	3760	1550	4410	1180	24900	38300	2790	462	455	441	187
7	1300	3280	1920	7940	884	7280	21900	2510	396	1180	412	437
8	1150	2220	3030	5920	1280	6010	10400	2100	747	1090	258	1240
9	1030	2300	2760	6350	1670	5740	9590	1560	828	966	195	1300
10	1010	2430	2950	10100	1680	5120	8940	1460	707	1010	335	512
11	969	2370	2560	7270	1500	4830	8530	2300	815	475	411	599
12	879	2420	3380	6110	1490	17200	8130	2160	808	290	427	362
13	802	2370	3510	5450	1440	32100	6010	2110	435	471	413	257
14	735	2320	2920	5670	1230	27600	5480	2070	516	489	406	474
15	678	2310	3410	6390	1440	9230	5310	1590	795	533	279	2540
16	644	1970	3570	4190	1780	7740	5150	806	748	545	304	2850
17	630	2260	3260	3010	1810	6830	5060	602	810	584	604	2100
18	596	2250	2920	4550	1810	6370	4930	1130	1540	283	1520	1930
19	595	2260	2040	3540	1310	5980	3670	1110	1480	258	1170	970
20	1300	2230	1310	3530	991	5730	3550	927	945	416	725	1010
21	1620	2220	2520	2900	751	4700	3380	1180	915	451	599	1490
22	1440	1070	3560	2000	1180	4120	6270	926	985	437	293	1160
23	1700	555	2940	1490	1620	3940	10800	596	877	478	227	916
24	1970	768	2650	1440	13800	3930	10100	440	763	467	402	824
25	13000	754	2510	2120	15600	3850	5960	1480	710	287	465	2280
26	20100	744	2810	2290	6340	3720	4870	1770	1180	229	470	5960
27	11300	819	2140	3320	6550	3220	4100	1730	1100	355	443	3060
28	5010	1490	2220	4140	6720	2310	3560	1690	679	433	434	3020
29	4510	2890	2290	3920	---	1590	3250	1630	699	432	268	2810
30	5790	3280	2310	3950	---	1520	3050	1220	677	488	207	2970
31	6800	---	2940	3690	---	1620	---	840	---	472	369	---
TOTAL	90953	72810	87490	126140	85866	280490	267350	48757	25581	16289	13810	43098
MEAN	2934	2427	2822	4069	3067	9048	8912	1573	853	525	445	1437
MAX	20100	4700	3740	10100	15600	36900	38300	2790	1540	1180	1520	5960
MIN	595	555	1310	1440	751	1520	2050	440	396	229	195	187

CAL YR 1976 TOTAL 954098 MEAN 2607 MAX 20100 MIN 189 MEAN‡ 2584 CFSM‡ 1.45 IN.‡ 19.71
WTR YR 1977 TOTAL 1158634 MEAN 3174 MAX 38300 MIN 187 MEAN‡ 3192 CFSM‡ 1.79 IN.‡ 24.29

‡Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

03588000 SHOAL CREEK AT LAWRENCEBURG, TN

LOCATION.--Lat 35°14'40", long 87°21'02", Lawrence County, Hydrologic Unit 06030005, on left bank at Lawrenceburg municipal water-supply intake, 500 ft (152 m) downstream from Little Shoal Creek, 0.5 mi (0.8 km) upstream from Crowson Creek, 0.9 mi (1.4 km) west of courthouse in Lawrenceburg, and at mile 55.9 (89.9 km).

DRAINAGE AREA.--55.4 mi^2 (143.5 km^2).

PERIOD OF RECORD.--June 1932 to March 1934, March 1967 to current year.

REVISED RECORDS.--WSP 1306: Drainage area. WSP 2110: 1933.

GAGE.--Water-stage recorder. Datum of gage 784.41 ft (239.088 m) above mean sea level. June 7, 1932, to Mar. 31, 1934, nonrecording gage at site 500 ft (152 m) downstream at datum 4.01 ft (1.222 m) lower. Mar. 22, 1967, to Sept. 30, 1970, at site 1300 ft (396 m) downstream at datum 7.71 ft (2.350 m) lower.

REMARKS.--Records good. About 5 ft^3/s (0.14 m^3/s) was diverted by Lawrenceburg water plant, some of which was returned to the stream through sewage treatment plant 0.6 mi (1.0 km) downstream. Records of periodic water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--11 years (water years 1933, 1968-77), 111 ft^3/s (3.144 m^3/s), 27.21 in/yr (691 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft^3/s (430 m^3/s) Mar. 15, 1973, gage height, 18.71 ft (5.703 m), from rating curve extended above 6,700 ft^3/s (190 m^3/s) on basis of computation of peak flow over dam; minimum daily, 20 ft^3/s (0.57 m^3/s) Aug. 24, Sept. 23, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1846, 20.0 ft (6.10 m) present site and datum, Mar. 28, 1902, discharge, 23,000 ft^3/s (651 m^3/s); flood of Mar. 21, 1955, reached a stage of 17.2 ft (5.24 m), present site and datum, discharge 18,000 ft^3/s (510 m^3/s), from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (60.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	0015	3480	98.6	6.97	2.124	Apr. 4	1645	2230	63.2	5.70	1.737
Mar. 4	0345	*8400	238	11.49	3.502	Sept.25	1445	2260	64.0	5.73	1.746
Mar. 12	0845	7920	224	11.02	3.359						

Minimum daily discharge, 20 ft^3/s (0.57 m^3/s) Aug. 24, Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	58	46	36	47	95	36	65	36	43	28	23
2	56	52	47	33	43	81	49	52	36	42	27	23
3	52	47	46	33	43	852	162	50	36	39	27	25
4	50	43	49	32	42	3020	1490	49	36	38	27	24
5	88	39	47	38	40	270	389	46	36	36	27	25
6	102	39	40	66	39	167	145	44	172	36	27	28
7	86	38	34	77	38	132	111	44	55	34	27	31
8	76	39	31	61	39	115	107	43	37	33	26	24
9	72	44	29	167	38	105	95	42	36	34	25	24
10	65	46	30	113	37	97	88	42	34	38	26	25
11	58	43	41	70	36	159	81	44	33	33	25	25
12	52	34	44	61	49	2490	73	43	40	33	24	23
13	47	34	44	58	46	247	73	42	132	33	26	81
14	41	38	42	155	42	134	70	42	52	32	27	308
15	36	36	40	103	44	107	66	42	37	31	47	81
16	31	35	39	84	43	92	61	40	34	30	36	29
17	30	32	35	66	39	81	60	39	238	31	31	25
18	29	42	33	66	42	77	56	38	214	30	27	24
19	58	33	33	63	42	70	56	39	115	29	25	30
20	52	36	30	56	39	63	53	38	247	30	27	23
21	47	39	27	55	37	58	61	39	66	30	26	22
22	41	33	27	55	36	55	65	39	47	31	24	21
23	36	36	27	53	553	49	101	37	44	30	22	20
24	94	36	27	56	762	47	103	38	42	30	20	21
25	373	38	46	60	128	58	79	38	141	29	21	841
26	90	60	40	58	122	34	66	38	162	28	22	134
27	63	49	34	82	277	37	60	38	55	29	24	113
28	30	60	33	63	111	52	53	38	47	28	24	65
29	38	42	33	56	---	47	55	38	44	31	23	61
30	132	45	40	55	---	43	56	37	42	30	23	68
31	72	---	40	50	---	39	---	46	---	30	23	---
TOTAL	2157	1246	1154	2081	2854	8973	4020	1310	2346	1011	814	2267
MEAN	69.6	41.5	37.2	67.1	102	289	134	42.3	78.2	32.6	26.3	75.6
MAX	373	60	49	167	762	3020	1490	65	247	43	47	841
MIN	29	32	27	32	36	34	36	37	33	28	20	20
CFSM	1.26	.75	.67	1.21	1.84	5.22	2.42	.76	1.41	.59	.48	1.37
IN.	1.45	.84	.77	1.40	1.92	6.03	2.70	.88	1.58	.68	.55	1.52

CAL YR 1976 TOTAL 28260 MEAN 77.2 MAX 981 MIN 24 CFSM 1.39 IN 18.98
WTR YR 1977 TOTAL 30233 MEAN 82.8 MAX 3020 MIN 20 CFSM 1.50 IN 20.30

03588400 CHISHOLM CREEK AT WESTPOINT, TN

LOCATION.--Lat 35°08'04", long 87°31'45", Lawrence County, Hydrologic Unit 06030005,on left bank at downstream side of pier of county road bridge,0.3 mi (0.5 km) northeast of Westpoint, and at mile 1.2 (1.9 km).

DRAINAGE AREA.--43.0 mi^2 (111 km^2).

PERIOD OF RECORD.--July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft (182.947 m) above mean sea level (Tennessee State Highway Department bench mark).

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--15 years, 83.3 ft^3/s (2.359 m^3/s) 26.31 in/yr (668 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft^3/s (507 m^3/s) Mar. 15, 1973, gage height, 14.74 ft (4.493 m), from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 8.4 ft^3/s (0.24 m^3/s) July 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/s) and maximum (*), from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of contracted-opening measurement:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	1345	1290	36.5	6.85	2.088	Mar. 12	1100	4950	140	10.43	3.179
Feb. 24	0415	1360	38.5	6.98	2.128	Apr. 04	1830	2520	71.4	8.50	2.591
Mar. 04	0415	*6520	185	11.26	3.432	Spet.25	1930	1240	35.1	6.76	2.060

Minimum discharge, 10 ft^3/s (0.28 m^3/s) Sept. 2, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	101	47	47	40	131	45	64	28	23	18	12
2	28	78	46	46	38	108	49	53	26	23	17	11
3	26	64	43	46	38	505	87	50	26	21	16	11
4	25	55	42	45	38	3130	1600	48	24	21	15	11
5	24	49	40	49	37	523	747	45	23	20	15	12
6	45	45	40	81	35	229	250	42	23	19	15	16
7	35	42	42	123	34	133	131	41	23	19	14	17
8	31	39	39	101	33	103	96	40	23	19	14	16
9	29	38	37	150	33	87	79	38	22	22	13	14
10	28	37	36	195	33	77	68	37	22	19	13	14
11	26	36	37	138	33	92	61	36	21	19	15	13
12	25	37	49	106	39	2140	56	34	21	19	14	12
13	25	34	46	87	38	538	51	32	22	18	14	15
14	24	35	45	146	36	217	49	31	26	17	15	67
15	24	35	44	148	34	129	48	31	24	17	18	84
16	24	34	43	124	33	96	45	30	23	16	17	48
17	25	33	41	96	33	81	43	30	38	16	18	29
18	24	32	39	85	33	73	42	31	37	16	19	23
19	24	32	38	73	33	66	42	28	26	16	17	28
20	31	32	37	64	32	60	40	28	79	16	16	26
21	29	31	35	56	32	54	41	28	42	19	15	21
22	26	31	34	50	32	51	49	30	32	22	14	19
23	25	30	34	46	144	49	73	29	34	22	14	18
24	287	30	33	51	900	47	100	29	28	19	13	17
25	802	30	46	48	296	45	79	35	31	19	14	409
26	290	40	50	44	171	44	66	38	44	19	13	166
27	130	55	45	53	254	44	59	37	42	18	13	84
28	86	50	45	48	169	49	53	31	32	17	12	67
29	66	54	43	43	---	48	51	29	26	21	12	60
30	157	49	43	42	---	48	49	28	25	21	12	73
31	143	---	55	42	---	45	---	33	---	18	12	---
TOTAL	2594	1288	1294	2473	2701	9042	4249	1116	893	591	457	1413
MEAN	83.7	42.9	41.7	79.8	96.5	292	142	36.0	29.8	19.1	14.7	47.1
MAX	802	101	55	195	900	3130	1600	64	79	23	19	409
MIN	24	30	33	42	32	44	40	28	21	16	12	11
CFSM	1.95	1.00	.97	1.86	2.24	6.79	3.30	.84	.69	.44	.34	1.10
IN.	2.24	1.11	1.12	2.14	2.34	7.82	3.68	.97	.77	.51	.40	1.22

CAL YR 1976 TOTAL 27761 MEAN 75.8 MAX 802 MIN 18 CFSM 1.76 IN 24.02
WTR YR 1977 TOTAL 28111 MEAN 77.0 MAX 3130 MIN 11 CFSM 1.79 IN 24.32

03588500 SHOAL CREEK AT IRON CITY, TN

LOCATION.--Lat 35°01'27", long 87°34'44", Lawrence County, Hydrologic Unit 06030005, near center of span on downstream side of bridge on county road, 400 ft (122 m) downstream from Holly Creek, 1,350 ft (411 m) upstream from Louisville and Nashville Railroad bridge, 1,350 ft (411 m) northeast of Iron City Post Office, and at mile 22.3 (35.9 km).

DRAINAGE AREA.--348 mi^2 (901 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1113: 1927 (M). WSP 1436: 1926(M), 1927-29, 1930(M), 1932, 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 534.22 ft (162.830 m) above mean sea level. Prior to Feb. 25, 1931, nonrecording gage at railroad bridge, 1,350 ft (411 m) downstream at datum 0.85 ft (0.259 m) lower. Feb. 25, 1931, to Sept. 30, 1933, nonrecording gage at site 825 ft (251 m) downstream and Oct. 1, 1933, to Sept. 30, 1957, water-stage recorder at site 750 ft (229 m) downstream at datum 0.69 ft (0.210 m) higher.

REMARKS.--Records good. Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg.

AVERAGE DISCHARGE.--52 years, 642 ft^3/s (18.18 m^3/s) 25.05 in/yr (636 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132,000 ft^3/s (3,740 m^3/s) Mar. 21, 1955, gage height, 27.25 ft (8.306 m), site and datum then in use, present site and datum, 28.4 ft (8.656 m), from rating curve extended above 50,000 ft^3/s (1,416 m^3/s) on basis of slope-area measurement made 1,500 ft (457 m) downstream; minimum, 38 ft^3/s (1.08 m^3/s) Aug. 31, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage about 3 ft (0.914 m) higher than that of Mar. 21, 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft^3/s (184 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	1400	8390	238	12.65	3.856	Mar. 12	1715	22800	646	18.32	5.584
Mar. 4	1030	*34400	974	20.87	6.361	Apr. 5	0100	12300	348	14.91	4.545

Minimum discharge, 80 ft^3/s (2.27 m^3/s) Aug. 27, 31, Sept. 1, gage height, 2.00 ft (0.610 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	927	440	426	327	1220	463	544	232	213	165	93
2	229	692	420	420	325	959	482	488	219	221	155	95
3	213	602	390	416	335	1710	689	446	219	206	143	95
4	198	525	365	404	332	21800	7580	425	211	198	138	95
5	188	463	342	414	323	5250	7570	400	208	193	135	95
6	332	416	329	592	299	2220	2410	365	206	191	130	110
7	389	380	350	1300	282	1570	1590	345	290	188	125	138
8	275	346	332	1030	269	1230	1240	328	221	186	120	145
9	257	326	300	1160	273	1010	1020	309	208	193	115	118
10	240	312	288	1780	269	875	865	287	203	196	110	110
11	216	299	291	1250	265	888	762	275	201	196	155	105
12	203	304	409	930	319	12700	688	266	198	188	150	97
13	193	278	451	755	356	6050	636	257	198	186	115	107
14	186	274	433	1040	318	2260	604	251	335	175	115	345
15	183	282	420	1330	301	1600	570	248	234	165	135	910
16	181	262	401	1070	284	1260	537	240	219	158	196	498
17	188	249	375	820	277	1040	509	234	251	150	178	281
18	181	245	347	720	279	934	491	242	599	148	188	213
19	175	244	323	612	276	813	488	232	432	145	150	216
20	211	238	315	562	266	740	464	232	614	148	135	263
21	245	231	296	502	260	671	457	229	495	158	125	201
22	203	219	269	453	260	626	588	240	287	191	118	170
23	191	212	268	414	454	577	810	232	232	198	113	155
24	991	212	256	439	6130	546	1550	229	219	181	110	150
25	4130	210	318	446	2450	523	1070	237	226	170	107	1140
26	2920	257	461	408	1510	517	796	260	599	178	105	2640
27	1250	505	407	366	1960	493	653	240	541	163	102	865
28	801	449	396	460	1590	527	574	229	309	150	102	773
29	629	509	376	394	---	560	534	224	232	196	100	537
30	1040	470	352	369	---	510	488	221	219	203	100	661
31	1370	---	461	355	---	488	---	234	---	181	95	---
TOTAL	18271	10938	11181	21637	20589	72167	37178	8989	8857	5613	4030	11421
MEAN	589	365	361	698	735	2328	1239	290	295	181	130	381
MAX	4130	927	461	1780	6130	21800	7580	544	614	221	196	2640
MIN	175	210	256	355	260	488	457	221	198	145	95	93
CFSM	1.69	1.05	1.04	2.01	2.11	6.69	3.56	.83	.85	.52	.37	1.10
IN.	1.95	1.17	1.20	2.31	2.20	7.71	3.97	.96	.95	.60	.43	1.22

CAL YR 1976 TOTAL 221828 MEAN 606 MAX 4380 MIN 165 CFSM 1.74 IN 23.71
WTR YR 1977 TOTAL 230871 MEAN 633 MAX 21800 MIN 93 CFSM 1.82 IN 24.68

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
05...	1120	187	120	7.4	18.0	5	6	9.1	9	--	--
15...	1145	190	140	--	15.5	--	--	--	--	--	--
29...	0705	633	--	--	10.0	--	--	--	--	1.2	--
NOV											
02...	1330	716	105	--	11.5	--	--	--	--	--	--
15...	1050	287	120	8.6	14.0	2	<1	11.7	4	--	--
DEC											
13...	0935	453	110	8.0	7.0	1	1	11.5	2	--	--
21...	0845	304	130	--	5.0	--	--	--	--	--	--
FEB											
02...	1235	326	85	--	3.0	--	--	--	--	--	--
15...	1000	290	160	7.1	5.0	5	7	9.5	9	1.1	260
MAY											
11...	1000	274	120	7.6	16.0	6	3	8.9	4	<1.0	920
11...	1120	274	125	--	17.0	--	--	--	--	--	--
JUL											
13...	1345	183	120	--	27.0	--	--	--	--	--	--
AUG											
10...	1000	110	140	6.7	26.7	7	5	6.7	5	2.1	200

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT											
05...	--	16	2.4	2.7	4.9	61	0	50	<1.0	4.0	<.1
15...	--	--	--	--	--	--	--	--	--	--	--
29...	600	--	--	--	--	--	--	--	--	--	--
NOV											
02...	--	--	--	--	--	--	--	--	--	--	--
15...	--	12	2.1	2.2	.4	108	14	112	2.0	4.0	<.1
DEC											
13...	--	16	2.9	2.8	.6	63	0	52	4.0	4.0	<.1
21...	--	--	--	--	--	--	--	--	--	--	--
FEB											
02...	--	--	--	--	--	--	--	--	--	--	--
15...	<10	18	2.1	2.5	.8	56	0	46	5.0	4.0	<.1
MAY											
11...	80	19	2.2	3.8	.9	72	0	59	8.0	4.0	<.1
11...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
10...	<100	26	2.6	4.1	1.4	60	0	49	8.0	4.0	<.1

03588500 SHOAL CREEK AT IRON CITY, TN--Continued

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
05...	6.6	60	.08	30.3	4	.32	.05	.13	.04	.03
15...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
02...	--	--	--	--	--	--	--	--	--	--
15...	5.4	80	.11	62.0	5	.48	.02	.08	.05	.03
DEC										
13...	4.8	90	.12	110	9	.42	.02	.06	.01	.04
21...	--	--	--	--	--	--	--	--	--	--
FEB										
02...	--	--	--	--	--	--	--	--	--	--
15...	3.4	60	.08	47.0	6	.43	.04	.12	.04	--
MAY										
11...	--	80	.11	59.2	7	.50	<.01	.12	.04	--
11...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	--	110	.15	32.7	21	.37	.02	.16	.06	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
05...	--	--	--	--	--	--	--	--	250	<50
15...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
02...	--	--	--	--	--	--	--	--	--	--
15...	200	<2	<100	<10	30	<1	<5	10	<50	<50
DEC										
13...	--	--	--	--	--	--	--	--	360	80
21...	--	--	--	--	--	--	--	--	--	--
FEB										
02...	--	--	--	--	--	--	--	--	--	--
15...	<200	--	<100	<10	70	<1	--	<10	570	--
MAY										
11...	300	--	<100	<10	--	<1	--	20	150	<50
11...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	<200	--	<100	<10	--	<1	--	10	270	<50

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
05...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
NOV										
02...	--	--	--	--	--	--	--	--	--	--
15...	<10	<10	240	<10	.4	<50	1	<10	90	1.8
DEC										
13...	--	--	20	<10	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
FEB										
02...	--	--	--	--	--	--	--	--	--	--
15...	29	<10	40	--	<.2	<50	<1	<10	50	1.2
MAY										
11...	<10	<10	20	<10	.8	<50	--	<10	30	1.5
11...	--	--	--	--	--	--	--	--	--	--
JUL										
13...	--	--	--	--	--	--	--	--	--	--
AUG										
10...	<10	<10	50	20	.4	<50	--	<10	80	2.0

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°03'54", long 88°15'08", Hardin County, Hydrologic Unit 06040001, at downstream end of lockwall in lower pool at Pickwick Landing Dam, 16.8 mi (27.0 km) upstream from Savannah, Tennessee, and at mile 206.7 (332.6 km).

DRAINAGE AREA.--32,820 mi^2 (85,000 km^2), approximately.

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1976 to current year.
WATER TEMPERATURE: April 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1976.

REMARKS.--Flow regulated by Pickwick Landing Dam and many other reservoirs above the station. Continuous discharge records are published under station 03593500 Tennessee River at Savannah, Tn.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
OCT												
19...	1400	30600	160	7.4	19.0	7	1	8.6	4	--	--	--
NOV												
01...	1400	63700	165	6.6	14.0	--	15	--	--	--	--	--
03...	0845	65700	--	--	14.0	--	--	--	--	<1.0	--	30
16...	1400	43200	180	6.2	12.0	10	1	5.6	5	--	--	--
30...	1400	51300	160	7.0	9.0	2	2	8.2	6	--	--	--
DEC												
20...	1500	72380	140	6.8	7.5	--	4	--	--	--	--	--
JAN												
12...	0900	104300	180	7.6	4.0	7	13	9.8	5	--	--	--
25...	1330	49000	160	7.7	3.0	--	10	--	--	--	--	--
FEB												
15...	1100	52264	160	7.2	5.0	--	6	--	--	--	--	--
MAR												
24...	1000	73000	130	7.3	13.0	25	21	9.0	8	--	--	--
24...	1001	73000	125	7.0	13.0	--	20	--	--	--	--	--
APR												
12...	1400	83000	120	7.2	19.0	15	22	7.4	9	--	--	--
22...	0900	64300	120	6.6	19.5	--	20	--	--	--	--	--
MAY												
18...	1400	59400	140	7.0	26.0	6	5	8.1	6	--	--	--
24...	0900	52000	130	6.6	24.0	--	6	--	--	--	--	--
JUN												
21...	0900	37000	140	6.8	26.0	10	7	6.2	6	2.1	5000	100
21...	0901	37000	140	6.5	26.0	--	6	6.2	--	--	--	--
JUL												
27...	0845	26300	150	6.5	30.0	--	1	5.8	--	--	--	--
AUG												
25...	0900	16300	160	6.5	30.0	--	2	6.5	--	--	--	--
SEP												
21...	1030	65100	160	6.5	25.0	5	4	5.9	11	2.0	2600	<100

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	FECAL COLI-FORM .7UM-MF (COL./100 ML)	FECAL STREP-TOCOCCI KF AGAR (COL. PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	TOTAL CAL-CIUM (CA) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	TOTAL MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO
OCT												
19...	--	--	65	--	19	--	4.3	--	6.9	--	--	--
NOV												
01...	14	--	67	13	--	20	--	4.1	--	7.5	19	.4
03...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	59	2	18	--	3.3	--	7.5	--	--	--
30...	--	--	63	6	18	--	4.3	--	7.4	--	--	--
DEC												
20...	B7	<1	74	20	--	23	--	4.0	--	6.7	16	.3
JAN												
12...	--	--	76	20	24	--	4.0	--	6.2	--	--	--
25...	B13	--	67	13	--	21	--	3.6	--	5.3	14	.3
FEB												
15...	<1	<1	73	16	--	23	--	3.7	--	5.8	14	.3
MAR												
24...	--	--	--	--	18	--	3.9	--	4.0	--	--	--
24...	B11	18	63	7	--	20	--	3.2	--	3.9	12	.2
APR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
22...	B7	29	59	10	--	18	--	3.4	--	3.4	11	.2
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
24...	<1	37	57	7	--	18	--	2.9	--	3.8	12	.2
JUN												
21...	--	--	--	--	20	--	3.9	--	4.1	--	--	--
21...	B1	B8	60	4	--	18	--	3.6	--	4.5	14	.3
JUL												
27...	B1	B19	63	9	--	18	--	4.3	--	6.0	17	.3
AUG												
25...	<1	B1	64	13	--	19	--	4.1	--	6.6	18	.4
SEP												
21...	B10	B610	65	16	26	19	5.4	4.2	7.4	7.5	20	.4

DATE	TOTAL PO-TAS-SIUM (K) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT												
19...	1.6	--	--	--	--	--	35	--	<.1	--	5.1	120
NOV												
01...	--	1.6	66	0	54	27	13	8.4	--	.2	5.2	102
03...	--	--	--	--	--	--	--	--	--	--	--	--
16...	1.3	--	70	--	57	71	15	8.0	<.1	--	4.7	100
30...	1.2	--	70	--	57	11	38	11	<.1	--	4.4	120
DEC												
20...	--	1.6	66	0	54	17	13	8.1	--	.1	4.6	89
JAN												
12...	1.3	--	68	--	56	2.7	16	10	--	--	3.0	80
25...	--	1.6	66	0	54	2.1	13	7.2	--	.1	4.8	91
FEB												
15...	--	1.6	69	0	57	7.0	13	6.6	--	.1	3.6	100
MAR												
24...	1.4	--	57	--	47	4.6	15	5.0	<.1	--	--	90
24...	--	1.5	68	0	56	11	10	4.9	--	.1	1.5	90
APR												
12...	--	--	49	--	40	4.9	--	--	--	--	--	--
22...	--	1.6	64	0	52	26	9.3	4.2	--	.0	4.3	86
MAY												
18...	--	--	56	--	46	9.0	--	--	--	--	--	--
24...	--	1.6	61	0	50	25	8.9	4.4	--	.1	4.9	76
JUN												
21...	1.5	--	59	0	48	15	12	6.0	.1	--	--	70
21...	--	1.5	68	0	56	34	9.8	5.2	--	.1	4.1	86
JUL												
27...	--	1.5	66	0	54	33	11	6.6	--	.1	4.8	88
AUG												
25...	--	1.7	63	0	52	32	12	7.9	--	.1	4.8	104
SEP												
21...	1.5	1.7	59	0	50	30	14	8.0	<.1	.1	6.1	110

B--Results based on colony count outside acceptable range (non-ideal colony count).

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ALUM-INUM (AL) (UG/L)
OCT												
19...	--	.16	9910	4	.33	.03	.13	--	--	--	.06	--
NOV												
01...	93	.14	17500	--	.36	--	--	.30	.66	2.9	.05	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	.14	11700	2	.42	.07	.12	--	--	--	.07	--
30...	--	.16	16600	4	.42	.07	.10	--	--	--	.05	400
DEC												
20...	94	.12	17400	--	.38	--	--	.29	.67	3.0	.05	--
JAN												
12...	--	.11	22500	5	.58	.06	.08	--	--	--	.04	--
25...	89	.12	12000	--	--	--	--	--	--	--	--	--
FEB												
15...	91	.14	14100	--	.52	--	--	.36	.88	3.9	.05	--
MAR												
24...	--	.12	17700	8	.50	.19	<.01	--	--	--	.07	1500
24...	79	.12	17700	--	.49	--	--	.31	.80	3.5	.07	--
APR												
12...	--	--	--	--	.44	.09	.12	--	--	--	.07	--
22...	76	.12	14900	--	.50	--	--	.29	.79	3.5	.07	--
MAY												
18...	--	--	--	--	.39	.03	.17	--	--	--	.03	--
24...	75	.10	10700	--	.38	--	--	.34	.72	3.2	.03	--
JUN												
21...	--	--	6990	8	.42	.04	.08	--	--	--	.04	<200
21...	80	.12	8590	--	.32	--	--	.31	.73	2.8	.05	--
JUL												
27...	85	.12	6250	--	.18	--	--	.61	.79	3.5	.04	--
AUG												
25...	87	.14	4580	--	.16	--	--	.28	.44	1.9	.04	--
SEP												
21...	90	.15	19300	8	.38	.02	.13	.24	.62	2.7	.06	700

DATE	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)
OCT												
19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
01...	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
30...	<2	--	--	<100	<10	40	<1	--	--	<5	--	--
DEC												
20...	2	0	2	--	--	--	0	0	0	11	0	11
JAN												
12...	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
24...	--	--	--	<100	<10	--	1	--	--	--	--	--
24...	1	1	0	--	--	--	0	0	0	<10	<10	0
APR												
12...	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
21...	--	--	--	<100	<10	--	1	--	--	--	--	--
21...	2	1	1	--	--	--	0	0	0	<10	<9	1
JUL												
27...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
25...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
21...	0	0	0	<100	<10	--	<1	0	0	<10	<10	0

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)
OCT										
19...	--	--	--	--	--	--	580	--	--	--
NOV										
01...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	230	--	--	--
30...	--	--	--	90	--	--	340	--	<10	--
DEC										
20...	0	0	0	6	3	3	200	30	10	8
JAN										
12...	--	--	--	--	--	--	300	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
15...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	20	--	--	1300	150	17	--
24...	0	0	0	4	1	3	790	40	6	6
APR										
12...	--	--	--	--	--	--	1200	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	--	--	--	--	340	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
JUN										
21...	--	--	--	20	--	--	270	<50	<10	--
21...	0	0	0	10	6	4	330	10	5	2
JUL										
27...	--	--	--	--	--	--	--	--	--	--
AUG										
25...	--	--	--	--	--	--	--	--	--	--
SEP										
21...	2	2	0	20	0	2	320	<50	<10	4

DATE	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)
OCT										
19...	--	--	60	--	--	--	--	--	--	--
NOV										
01...	--	--	--	--	--	--	--	--	--	--
16...	--	--	40	--	--	--	--	--	--	--
30...	--	<10	50	--	.2	--	--	<50	2	--
DEC										
20...	2	--	40	10	.2	.2	.0	--	0	0
JAN										
12...	--	--	30	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--	--
FEB										
15...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	<10	60	60	<.2	--	--	<50	--	--
24...	0	--	20	10	.0	.0	.0	--	0	0
APR										
12...	--	--	40	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
MAY										
18...	--	--	30	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--
JUN										
21...	--	<10	50	20	<.2	--	--	<50	--	--
21...	3	--	40	0	.0	.0	.0	--	0	0
JUL										
27...	--	--	--	--	--	--	--	--	--	--
AUG										
25...	--	--	--	--	--	--	--	--	--	--
SEP										
21...	4	<10	50	<10	<.2	.0	.0	<50	0	0

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TI-TANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)	SUS-PENDED ORGANIC CARBON (C) (MG/L)
OCT									
19...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	<10	<1000	20	--	--	1.8	--	--
DEC									
20...	0	--	--	20	20	3	3.2	--	--
JAN									
12...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
FEB									
15...	--	--	--	--	--	--	--	--	--
MAR									
24...	--	<10	<1000	30	--	--	2.0	--	--
24...	0	--	--	50	40	10	4.7	--	--
APR									
12...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
MAY									
18...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
JUN									
21...	--	<10	<1000	60	--	--	2.8	--	--
21...	0	--	--	30	0	30	--	3.4	2.8
JUL									
27...	--	--	--	--	--	--	--	--	--
AUG									
25...	--	--	--	--	--	--	--	--	--
SEP									
21...	0	<10	<1000	290	0	10	1.6	--	--

DATE	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT									
19...	--	--	--	--	--	--	--	--	--
NOV									
01...	51	--	--	--	--	--	15	2580	53
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
20...	--	12.0	--	2.51	--	4597	3	586	100
JAN									
12...	--	--	--	--	--	--	--	--	--
25...	4300	--	--	--	--	--	--	--	--
FEB									
15...	19000	--	--	--	--	--	7	988	88
MAR									
24...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	27	5320	76
APR									
12...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	35	6080	95
MAY									
18...	--	--	--	--	--	--	--	--	--
24...	3200	--	--	--	--	--	10	1400	93
JUN									
21...	--	--	--	--	--	--	--	--	--
21...	1900	--	1.48	--	.131	851	17	1700	92
JUL									
27...	11000	--	--	--	--	--	26	1850	69
AUG									
25...	2300	--	4.55	--	.012	703	8	352	72
SEP									
21...	--	--	--	--	--	--	28	4920	95

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	153	151	153	167	165	166	150	147	149	159	157	158
2	153	152	153	167	164	165	149	147	148	159	157	158
3	154	152	154	165	163	164	149	146	148	162	158	160
4	156	154	155	165	162	164	149	146	147	163	161	162
5	156	155	156	166	163	165	149	146	148	164	160	162
6	158	155	157	166	163	165	148	146	147	164	160	162
7	159	158	158	166	163	165	148	146	147	164	162	163
8	161	159	160	166	162	164	148	147	147	164	162	164
9	162	160	161	164	161	162	148	146	148	164	161	163
10	162	159	161	161	160	161	149	146	147	163	161	162
11	163	162	162	161	159	160	145	144	145	165	161	163
12	164	163	163	161	160	160	145	142	144	165	162	164
13	166	163	164	162	159	160	145	142	144	163	162	162
14	167	164	166	162	159	160	145	142	145	163	159	161
15	168	167	168	163	159	160	145	143	144	163	161	162
16	170	169	170	164	160	161	145	143	144	163	160	161
17	171	170	171	163	159	161	144	143	144	163	161	162
18	172	170	171	162	160	161	144	142	143	164	159	162
19	173	172	173	162	160	161	142	141	141	160	159	159
20	164	162	164	161	160	161	143	140	141	160	157	158
21	166	165	165	162	160	161	145	142	144	158	157	158
22	167	166	166	161	159	160	150	141	145	158	156	157
23	167	166	167	161	159	160	144	141	143	159	157	158
24	167	162	164	160	157	159	146	143	144	160	159	160
25	164	163	164	158	155	156	145	140	142	162	160	161
26	165	164	165	155	152	154	149	142	144	---	---	---
27	167	165	165	153	151	153	151	144	147	---	---	---
28	166	165	166	152	150	151	154	148	150	---	---	---
29	166	164	165	151	149	150	160	153	156	---	---	---
30	164	162	163	150	148	149	154	152	153	---	---	---
31	165	164	164	---	---	---	157	154	155	---	---	---
MONTH	173	151	163	167	148	160	160	140	146			

	FEBRUARY	MARCH	APRIL	MAY
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
MONTH				

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---	151	149	149	185	162	169
2				---	---	---	152	149	150	171	162	165
3				---	---	---	152	150	150	179	162	167
4				---	---	---	152	149	150	169	162	165
5				---	---	---	152	149	150	172	163	166
6				---	---	---	152	150	150	177	161	167
7				---	---	---	153	150	151	171	164	167
8				---	---	---	154	150	152	165	162	163
9				---	---	---	157	151	153	165	162	163
10				---	---	---	156	153	154	165	161	163
11				---	---	---	162	154	156	165	162	163
12				---	---	---	161	154	156	165	162	163
13				---	---	---	161	155	156	167	161	164
14				---	---	---	161	155	156	168	158	164
15				---	---	---	162	155	157	166	160	163
16				---	---	---	161	155	157	165	160	163
17				---	---	---	166	156	159	172	161	164
18				162	140	141	159	156	157	173	163	168
19				144	141	142	160	155	158	174	164	170
20				146	142	143	159	157	158	172	163	167
21				145	143	144	165	157	160	169	157	163
22				146	143	144	164	157	160	160	159	159
23				145	143	144	165	158	161	159	158	159
24				146	144	144	165	160	161	160	158	159
25				146	145	145	161	160	161	159	155	157
26				148	145	146	161	159	160	158	156	157
27				148	146	147	161	159	161	158	157	157
28				151	147	148	164	160	161	158	156	157
29				149	147	148	167	161	163	157	155	156
30				150	147	148	165	160	163	156	154	155
31				150	148	149	175	162	167	---	---	---
MONTH							175	149	157	185	154	163

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	22.5	22.5	14.0	14.0	14.0	8.0	8.0	8.0	5.5	5.0	5.0
2	23.0	22.5	22.5	14.0	13.5	13.5	8.0	8.0	8.0	4.5	4.5	4.5
3	23.0	22.5	22.5	13.5	13.5	13.5	8.0	7.5	7.5	4.5	4.5	4.5
4	23.0	22.5	23.0	13.5	13.0	13.0	8.0	7.5	8.0	5.0	4.5	5.0
5	23.0	22.5	23.0	13.0	12.5	13.0	8.0	8.0	8.0	5.0	5.0	5.0
6	22.5	22.0	22.5	12.5	12.5	12.5	8.5	8.0	8.0	5.0	5.0	5.0
7	22.0	21.0	22.0	12.5	12.5	12.5	8.5	8.0	8.0	5.0	5.0	5.0
8	21.5	20.5	21.0	12.5	11.5	12.0	8.0	7.5	7.5	5.0	5.0	5.0
9	20.5	20.0	20.5	11.5	11.5	11.5	7.5	7.5	7.5	5.0	5.0	5.0
10	20.5	19.5	20.0	11.5	11.0	11.5	7.5	7.0	7.0	5.0	3.5	4.0
11	20.5	20.0	20.0	11.5	11.0	11.5	7.5	7.0	7.5	4.0	3.5	3.5
12	20.0	20.0	20.0	11.0	10.5	11.0	7.5	7.5	7.5	4.0	3.5	4.0
13	20.0	19.5	20.0	10.5	10.5	10.5	7.5	7.5	7.5	4.0	3.5	4.0
14	20.0	19.5	19.5	10.5	10.0	10.0	7.5	7.0	7.5	4.0	4.0	4.0
15	20.0	19.5	19.5	10.0	10.0	10.0	7.5	7.5	7.5	4.0	4.0	4.0
16	20.0	19.5	19.5	10.0	10.0	10.0	7.5	7.5	7.5	4.0	3.0	3.5
17	19.5	19.0	19.0	10.0	10.0	10.0	7.5	7.0	7.5	3.0	2.5	3.0
18	19.0	18.5	18.5	10.0	9.5	10.0	7.5	7.5	7.5	3.0	2.5	2.5
19	18.5	18.0	18.5	10.0	10.0	10.0	7.5	7.5	7.5	2.5	2.0	2.0
20	18.0	17.5	18.0	10.0	10.0	10.0	7.5	7.0	7.5	2.5	2.0	2.0
21	17.5	17.0	17.5	10.0	10.0	10.0	7.0	6.5	7.0	2.5	2.0	2.5
22	17.0	16.5	17.0	10.0	10.0	10.0	6.5	6.0	6.5	2.5	2.0	2.5
23	16.5	16.0	16.5	10.0	9.5	10.0	6.5	6.0	6.0	2.5	2.5	2.5
24	16.0	16.0	16.0	9.5	9.5	9.5	6.0	6.0	6.0	3.0	2.5	3.0
25	16.0	16.0	16.0	9.5	9.5	9.5	6.5	6.0	6.0	3.0	3.0	3.0
26	16.0	15.5	16.0	9.5	9.5	9.5	6.5	6.0	6.5	---	---	---
27	15.5	15.5	15.5	10.0	9.5	9.5	7.0	6.5	6.5	---	---	---
28	15.5	15.0	15.0	9.5	9.0	9.5	7.0	6.5	7.0	---	---	---
29	15.0	14.5	14.5	9.0	8.5	8.5	7.0	6.5	6.5	---	---	---
30	14.5	14.0	14.5	8.5	8.0	8.0	6.5	6.0	6.5	---	---	---
31	14.0	14.0	14.0	---	---	---	6.0	5.5	5.5	---	---	---
MONTH	23.0	14.0	19.0	14.0	8.0	11.0	8.5	5.5	7.0			

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

MONTH

	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	30.0	29.5	30.0	30.5	30.0	30.0
2	---	---	---	---	---	---	29.5	29.0	29.5	30.0	30.0	30.0
3	---	---	---	---	---	---	29.0	29.0	29.0	30.0	29.5	30.0
4	---	---	---	---	---	---	29.5	29.0	29.5	30.0	29.5	29.5
5	---	---	---	---	---	---	29.5	29.0	29.5	29.5	29.5	29.5
6	---	---	---	---	---	---	30.0	29.5	29.5	29.5	29.0	29.0
7	---	---	---	---	---	---	30.5	30.0	30.0	29.0	28.5	28.5
8	---	---	---	---	---	---	30.5	30.0	30.0	28.5	28.0	28.5
9	---	---	---	---	---	---	30.5	30.0	30.5	28.0	28.0	28.0
10	---	---	---	---	---	---	30.5	30.5	30.5	28.0	28.0	28.0
11	---	---	---	---	---	---	30.5	30.5	30.5	27.5	27.5	27.5
12	---	---	---	---	---	---	31.0	30.5	30.5	27.5	27.0	27.0
13	---	---	---	---	---	---	31.0	30.5	30.5	27.0	26.5	27.0
14	---	---	---	---	---	---	31.0	30.5	30.5	26.5	26.5	26.5
15	---	---	---	---	---	---	30.5	30.0	30.5	26.5	26.0	26.0
16	---	---	---	---	---	---	30.5	30.0	30.0	26.0	25.5	26.0
17	---	---	---	---	---	---	30.5	30.0	30.0	25.5	25.5	25.5
18	31.0	30.5	30.5	30.0	29.5	30.0	30.0	29.5	30.0	25.5	25.5	25.5
19	30.5	30.5	30.5	29.5	28.5	29.0	29.5	28.5	29.0	25.5	25.0	25.5
20	30.5	30.0	30.5	29.0	29.0	29.0	29.0	29.0	29.0	25.0	25.0	25.0
21	30.5	30.0	30.5	29.5	29.0	29.0	29.5	29.0	29.0	25.0	25.0	25.0
22	30.5	30.5	30.5	29.5	29.0	29.5	29.5	29.0	29.5	25.0	25.0	25.0
23	30.5	30.5	30.5	29.5	29.0	29.5	29.5	29.0	29.5	25.0	25.0	25.0
24	31.0	30.5	30.5	30.0	29.5	30.0	30.0	29.5	30.0	25.0	24.5	25.0
25	31.0	30.5	30.5	30.0	29.5	29.5	30.0	29.5	29.5	24.5	24.0	24.5
26	30.5	30.5	30.5	30.0	29.5	30.0	30.0	29.5	30.0	24.5	24.0	24.0
27	30.5	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	24.5	24.0	24.0
28	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	24.5	24.0	24.0
29	30.0	29.5	29.5	30.0	29.5	30.0	30.0	29.5	30.0	24.0	23.5	23.5
30	30.0	29.5	30.0	30.0	29.5	30.0	30.0	29.5	30.0	23.5	23.5	23.5
31	30.5	30.0	30.0	30.5	29.5	30.0				---	---	---
MONTH				31.0	28.5	30.0	30.5	23.5	26.5			

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	NOV 1,76	JAN 25,77	FEB 15,77	MAY 24,77
TIME	1400	1330	1100	0900
TOTAL CELLS/ML	51	4300	19000	3200
DIVERSITY: DIVISION	0.7	1.0	0.2	1.4
.CLASS	0.7	1.0	0.2	1.4
..ORDER	0.7	1.3	0.3	2.4
...FAMILY	0.7	1.3	0.4	2.5
....GENUS	0.7	2.0	1.2	2.6

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	*	0
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	30	1
....MICRACTINIUM	--	-	28	1	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	10#	20	85	2	*	0	*	0
....DICTYOSPHAERIUM	--	-	--	-	380	2	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	120	4
..ULOTRICHALES								
...ULOTRICHACEAE								
....HORMIDIUM	--	-	--	-	--	-	800#	25
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	28	1	--	-	*	0
...VOLVOCACEAE								
....PANDORINA	--	-	--	-	--	-	950#	30
..ZYGNEMATALES								
...DESMIDIACEAE								
....EUASTRUM	--	-	*	0	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	1300#	31	12000#	65	650#	20
....MELOSIRA	41#	80	1600#	38	5700#	30	*	0
....STEPHANODISCUS	--	-	*	0	--	-	--	-
..PENNALES								
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	99	2	380	2	--	-
....SYNEDRA	--	-	*	0	--	-	*	0
...NAVICULACEAE								
....STAURONEIS	--	-	*	0	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	--	-	*	0	*	0	270	8
...SURIRELLACEAE								
....SURIRELLA	--	-	*	0	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROCCOCCALES								
...CHROCCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	--	-	280	9
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	1000#	24	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.CRYPTOPHYCEAE								
..CRYPTOMONIDALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	30	1
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	*	0	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	JUN 21,77	JUL 27,77	AUG 25,77
TIME	0900	0845	0900
TOTAL CELLS/ML	1900	11000	2300
DIVERSITY: DIVISION	1.6	1.5	1.6
.CLASS	1.6	1.5	1.6
..ORDER	2.5	1.7	2.1
...FAMILY	2.7	2.0	2.6
....GENUS	2.8	2.7	3.3

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	*	0	--	-	12	1
...HYDRODICTYACEAE						
....PEDIASTRUM	38	2	--	-	99	4
...MICRACTINIACEAE						
....GOLENKINIA	--	-	69	1	25	1
....MICRACTINIUM	76	4	350	3	110	5
...OOCYSTACEAE						
....CHODATELLA	--	-	--	-	25	1
....DICTYOSPHAERIUM	--	-	350	3	--	-
....TETRAEDRON	--	-	100	1	--	-
....TREUBARIA	*	0	--	-	25	1
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	99	4
....SCENEDESMUS	19	1	900	8	250	11
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	10	1	--	-	--	-
...PALMELLACEAE						
....GLOEOCYSTIS	--	-	--	-	25	1
....SPHAEROCYSTIS	310#	16	--	-	--	-
..ULOTRICHALES						
...ULOTRICHACEAE						
....HORMIDIUM	140	8	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CARTERIA	*	0	--	-	--	-
....CHLAMYDOMONAS	29	2	100	1	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	160	8	1300	12	250	11
....MELOSIRA	110	6	2900#	27	540#	24
....STEPHANODISCUS	--	-	--	-	--	-
..PENNALES						
....SYNEDRA	43	2	69	1	--	-
...NITZSCHIACEAE						
....NITZSCHIA	14	1	--	-	49	2
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	--	-	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCCOCCALES						
...CHROCCOCCACEAE						
....AGMENELLUM	--	-	1100	10	200	9
....ANACYSTIS	810#	43	3400#	31	200	9
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	48	3	210	2	390#	17
EUGLENOPHYTA (EUGLENOIDS)						
.CRYPTOPHYCEAE						
..CRYPTOMONIDALES						
...CRYPTOMONODACEAE						
....CRYPTOMONAS	33	2	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...CERATIACEAE						
....CERATIUM	*	0	--	-	--	-
...GLENODINIACEAE						
....GLENODINIUM	10	1	--	-	--	-

03593500 TENNESSEE RIVER AT SAVANNAH, TN

LOCATION.--Lat 35°13'29", long 88°15'26", Hardin County, Hydrologic Unit 06040001, on right bank at downstream side of bridge on U.S. Highway 64, at Savannah, 16.8 mi (27.0 km) downstream from Pickwick Landing Dam and at mile 189.9 (305.5 km).

DRAINAGE AREA.--33,140 mi^2 (85,830 km^2), approximately.

PERIOD OF RECORD.--September 1930 to current year. Gage-height records collected in this vicinity since June 1905, are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1306: 1936 (monthly runoff). WSP 2110: 1966. WRD Tenn. 1974: 1973.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft (91.440 m) above mean sea level. Prior to Apr. 7, 1945, at datum 41.61 ft (12.683 m) higher. Since Oct. 1, 1948, auxiliary water-stage recorder on downstream end of lock wall in lower pool at Pickwick Landing Dam, 16.8 mi (27.0 km) upstream from base gage at same datum. Apr. 5, 1937, to Jan. 31, 1939, auxiliary nonrecording gage 4.0 mi (6.4 km) downstream and Feb. 1, 1939, to Sept. 30, 1948, water-stage recorder 4.3 mi (6.9 km) downstream from base gage at same datum.

REMARKS.--Records fair. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 390 and Water Resources Data for adjoining states, 1976). Flow now almost completely regulated.

AVERAGE DISCHARGE.--47 years, 54,710 ft^3/s (1,549 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 585,000 ft^3/s (16,600 m^3/s) Mar. 17, 1973, from Pickwick Landing Dam releases furnished by Tennessee Valley Authority; maximum gage height, 96.11 ft (29.294 m) Mar. 20, 1973; minimum discharge 60 ft^3/s (1.70 m^3/s) Apr. 23, 1966; minimum gage height, 41.20 ft (12.558 m), present datum, Oct. 20, 1931; minimum gage height since Kentucky Lake reached minimum pool elevation on Apr. 7, 1945, 53.40 ft (16.276 m) Jan. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1867, 101.2 ft (30.85 m) Mar. 21, 1897, present datum, from floodmarks, discharge, 450,000 ft^3/s (12,700 m^3/s), from rating curve extended aoove 320,000 ft^3/s (9,060 m^3/s). Flood of Jan. 2, 1927, reached a stage of 92.7 ft (28.25 m), present datum, discharge, 349,000 ft^3/s (9,880 m^3/s). Minimum stage since 1905, 38.8 ft (11.83 m) present datum, Sept. 8, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 260,000 ft^3/s (7,360 m^3/s) Apr. 7; maximum gage height, 82.43 ft (25.125 m) Apr. 8; minimum daily discharge, 19,300 ft^3/s (547 m^3/s) Aug. 24; minimum gage height. 54.34 ft (16.563 m) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35000	57800	54200	56400	47800	78800	79300	48400	41000	33300	30900	31400
2	29000	59000	54000	56200	39200	79300	80400	51900	42500	37500	30400	22700
3	28000	49300	59900	61000	38300	80700	83200	53900	40200	37000	26200	21400
4	32400	49800	60200	64000	31000	123000	130000	55000	37700	38500	22900	19500
5	29500	49200	43500	59500	30500	136000	235000	43500	35300	37800	22100	21500
6	32200	39600	51000	52000	33400	134000	256000	47200	37600	40900	38600	22600
7	31500	35100	45200	61300	37100	132000	259000	45900	39100	40000	38200	39000
8	29700	42400	56400	66600	34600	130000	250000	26000	33500	42200	28200	58600
9	24400	40100	60800	78600	31700	128000	230000	42000	34400	26000	27100	55300
10	27800	43800	58000	90400	30700	127000	192000	51800	35600	23700	28400	48400
11	32800	43200	52000	96000	33000	119000	154000	46200	28600	20900	27800	43400
12	32300	40700	57100	99200	31700	123000	111000	41900	28300	35200	28800	46300
13	36700	37500	66100	99700	30000	149000	88900	45200	39500	38000	36200	38400
14	39700	33700	60900	101000	33200	164000	86400	34600	44300	32500	29300	40300
15	39900	37900	63100	102000	44000	167000	82700	33800	39400	31900	30800	52200
16	28500	40400	70200	102000	42000	167000	55600	33500	41300	47100	32800	61300
17	28000	41700	67300	92200	37700	154000	52600	39400	41200	42100	32600	61400
18	38200	43800	67400	82900	29900	128000	57700	38200	46600	42400	38300	60800
19	36700	39900	63600	79200	26900	99900	51900	37500	51300	31300	44200	65100
20	38900	30700	55800	72200	27000	85300	54600	36400	52600	27200	42400	58800
21	38200	28200	64000	66800	23300	73500	56800	35800	32400	32100	34900	54000
22	35800	34400	63600	61000	26200	58800	63500	36400	36200	27000	36500	54800
23	34800	36000	58200	52000	24000	66700	84400	39800	36600	42100	23400	55300
24	30500	39200	56100	49100	51700	67100	76900	40600	37800	40600	19300	39700
25	51200	28600	61300	46700	71900	56300	69700	44700	45300	34600	27500	29400
26	67900	31700	64200	51900	84700	48500	60300	44700	42800	38900	43300	42200
27	67200	38900	65600	51300	86300	42700	67100	40800	42900	34200	33500	59400
28	66900	30600	60700	52600	84000	56100	57500	40600	40900	34300	29700	63600
29	66500	45200	61200	61200	---	39600	55500	35300	31500	37300	26500	66000
30	66500	50400	52000	48700	---	46100	48700	35700	26600	40600	29600	60300
31	62100	---	53000	47600	---	66100	---	44700	---	37800	30700	---
TOTAL	1238800	1218800	1826600	2161300	1141800	3126500	3230700	1291400	1163000	1105000	971100	1393100
MEAN	39960	40630	58920	69720	40780	100900	107700	41660	38770	35650	31330	46440
MAX	67900	59000	70200	102000	86300	167000	259000	55000	52600	47100	44200	66000
MIN	24400	28200	43500	46700	23300	39600	48700	26000	26600	20900	19300	19500

CAL YR 1976 TOTAL 18246330 MEAN 49850 MAX 121000 MIN 8830
WTR YR 1977 TOTAL 19868100 MEAN 54430 MAX 259000 MIN 19300

03596000 DUCK RIVER BELOW MANCHESTER, TN

LOCATION.--Lat 35°28'15", long 86°07'18", Coffee County, Hydrologic Unit 06040002, on right bank 50 ft (15 m) downstream from Powers Bridge, 2.0 mi (3.2 km) southwest of Manchester, 3.2 mi (5.1 km) downstream from Little Duck River, 7.0 mi (11.3 km) upstream from Crumpton Creek, and at mile 265.4 (427.0 km).

DRAINAGE AREA.--107 mi^2 (277 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1934 to current year.

REVISED RECORDS.--WSP 1436: 1946-47.

GAGE.--Water-stage recorder. Datum of gage is 878.23 ft (267.685 m) above mean sea level.

REMARKS.--Records good. Occasional regulation for short periods during low flow by small reservoirs above station. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--43 years, 186 ft^3/s (5.268 m^3/s), 23.61 in/yr (600 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft^3/s (1,080 m^3/s) May 27, 1973, gage height, 20.95 ft (6.386 m), from rating curve extended above 12,000 ft^3/s (340 m^3/s), based on contracted-opening measurement at gage height 15.04 ft (4,584 m), and slope-area measurements at gage heights 18.93 ft (5.770 m) and 20.95 ft (6.386 m); minimum, 8.0 ft^3/s (0.23 m^3/s) Aug. 12, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 23.2 ft (7.07 m) from floodmarks by Tennessee Valley Authority, discharge, about 50,000 ft^3/s (1,420 m^3/s). Flood in March 1902 reached approximately same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Oct. 25	2315	2840	80.4	7.44	2.268	Mar. 12	2245	5210	148	10.41	3.173
Mar. 4	1530	4310	122	9.40	2.865	Apr. 4	1800	*12300	348	15.13	4.612

Minimum discharge, 27 ft^3/s (0.76 m^3/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	173	87	109	77	276	124	272	36	31	31	30
2	44	126	84	86	72	214	134	177	32	60	31	29
3	38	105	79	80	72	219	445	508	31	40	30	30
4	35	93	72	83	74	3010	7890	284	30	35	30	30
5	33	83	65	166	79	1100	3310	207	29	32	30	30
6	40	72	65	261	74	522	770	147	30	32	30	30
7	48	69	109	377	66	374	478	151	29	31	30	48
8	48	64	143	253	63	276	341	185	31	31	30	38
9	55	62	99	398	62	225	261	124	30	31	30	31
10	56	64	86	759	62	192	223	89	30	35	31	30
11	47	58	83	310	63	173	197	70	30	32	31	30
12	40	58	166	204	84	2270	177	59	30	32	31	30
13	37	57	214	164	116	2160	167	55	30	31	31	29
14	35	58	141	252	105	581	155	51	30	31	86	116
15	35	58	124	401	98	377	143	50	31	31	48	287
16	35	57	122	263	87	286	131	47	30	31	158	183
17	36	54	102	160	78	230	121	44	39	31	73	109
18	36	52	90	133	76	216	114	41	35	31	73	57
19	37	50	80	107	84	185	108	40	31	30	50	90
20	47	49	83	100	81	225	102	38	32	31	32	192
21	42	47	90	98	74	202	100	42	51	30	31	69
22	42	45	76	89	70	172	124	59	32	32	31	45
23	39	43	67	83	77	158	210	70	38	31	30	37
24	65	42	65	105	1160	141	335	65	31	31	59	34
25	1340	42	76	154	536	123	275	47	147	39	37	65
26	1320	46	137	147	312	110	194	42	118	34	31	274
27	304	66	115	200	581	103	150	39	63	31	30	164
28	169	87	96	179	417	112	127	45	39	31	30	156
29	122	151	84	122	---	164	114	111	32	32	30	90
30	151	111	76	94	---	175	120	52	31	32	30	86
31	282	---	118	84	---	171	---	42	---	31	30	---
TOTAL	4712	2142	3094	6021	4800	14742	17140	3253	1208	1023	1285	2469
MEAN	152	71.4	99.8	194	171	476	571	105	40.3	33.0	41.5	82.3
MAX	1340	173	214	759	1160	3010	7890	508	147	60	158	287
MIN	33	42	65	80	62	103	100	38	29	30	30	29
CFSM	1.42	.67	.93	1.81	1.60	4.45	5.34	.98	.38	.31	.39	.77
IN.	1.64	.74	1.08	2.09	1.67	5.13	5.96	1.13	.42	.36	.45	.86

CAL YR 1976 TOTAL 56394 MEAN 154 MAX 2000 MIN 33 CFSM 1.44 IN 19.61
WTR YR 1977 TOTAL 61889 MEAN 170 MAX 7890 MIN 29 CFSM 1.59 IN 21.52

03596000 DUCK RIVER BELOW MANCHESTER, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: December 1975 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 5, 1975.

REMARKS.--No record Aug. 1-9, instrument malfunction.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C Aug. 16, 1977; minimum, 1.5°C Feb. 2, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.0°C Aug. 16; minimum, 1.5°C Feb. 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	16.5	17.0	11.5	11.0	11.0	7.0	5.5	6.5	3.5	3.0	3.5
2	18.0	16.5	17.0	11.5	10.5	11.0	8.0	6.5	6.5	3.5	2.0	3.0
3	18.0	16.0	17.0	11.5	10.5	11.0	6.5	6.0	6.5	4.0	3.0	3.5
4	18.5	16.0	17.0	11.0	10.0	10.5	6.5	6.0	6.0	4.5	4.0	4.0
5	18.5	17.0	18.0	10.0	9.0	9.5	7.0	6.0	6.0	4.5	4.0	4.5
6	18.0	17.0	18.0	9.5	9.0	9.5	8.0	6.0	7.0	4.5	3.5	4.0
7	17.0	15.5	16.5	10.0	9.0	9.5	8.0	6.5	7.0	4.0	3.5	4.0
8	16.0	15.0	15.5	9.5	8.0	9.0	6.5	5.5	6.0	5.0	3.5	4.0
9	15.5	14.5	15.0	9.0	8.0	8.5	6.0	5.0	5.5	5.0	4.0	4.5
10	15.0	14.0	14.5	10.0	8.5	9.5	6.5	5.5	6.0	4.5	3.5	4.0
11	15.0	14.0	14.5	10.0	8.5	9.5	7.0	6.0	6.5	3.5	3.0	3.0
12	15.0	13.5	14.5	9.0	8.0	8.5	8.5	7.0	8.0	4.0	3.0	3.5
13	15.5	14.0	14.5	8.5	7.0	8.0	8.5	7.0	8.0	4.5	3.0	3.5
14	16.0	14.5	15.0	8.5	7.0	8.0	8.0	6.5	7.0	5.0	4.5	4.5
15	15.0	14.0	14.5	9.0	8.5	8.5	9.0	8.0	8.5	5.0	3.5	4.0
16	15.5	14.5	15.0	9.0	8.0	8.5	8.5	8.0	8.0	4.5	3.5	4.0
17	15.0	13.5	14.5	9.0	8.0	8.5	8.0	7.0	7.0	3.5	3.0	3.5
18	14.0	12.0	13.5	9.0	8.0	8.5	8.0	7.0	7.0	4.0	3.0	3.5
19	13.5	12.0	13.0	9.5	8.5	9.0	8.0	7.0	8.0	3.5	3.0	3.0
20	13.5	13.0	13.5	10.5	9.5	10.0	8.5	8.0	8.5	3.5	3.0	3.0
21	13.5	11.5	13.0	9.5	8.5	9.0	8.0	5.0	6.5	3.5	2.0	2.0
22	13.0	11.0	12.0	9.0	8.0	8.5	5.0	4.5	5.0	3.5	2.0	3.0
23	13.0	11.5	12.0	8.0	6.5	7.0	5.0	4.5	5.0	4.0	2.0	3.0
24	14.0	13.0	13.5	8.5	7.0	8.0	5.0	4.0	4.5	4.5	4.0	4.0
25	14.5	14.0	14.5	9.0	7.0	8.0	5.5	4.0	5.0	4.5	4.0	4.0
26	14.0	13.0	13.5	10.5	9.0	9.5	5.5	5.0	5.0	5.0	3.5	4.0
27	13.0	12.0	13.0	11.0	10.5	11.0	5.5	4.5	5.0	5.5	4.5	4.5
28	12.0	11.0	11.5	11.0	9.0	10.0	6.0	5.0	5.5	5.0	3.5	4.5
29	11.5	10.5	11.0	9.0	8.0	8.5	6.0	4.5	5.0	4.0	3.0	3.5
30	12.0	11.0	11.5	8.0	6.5	7.0	5.5	4.5	4.5	4.0	3.0	3.5
31	12.0	11.0	11.5	---	---	---	5.5	3.5	---	4.0	3.5	3.5
MONTH	18.5	10.5	14.5	11.5	6.5	9.0	9.0	3.5	6.5	5.5	2.0	3.5

03596000 DUCK RIVER BELOW MANCHESTER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	3.0	3.5	9.0	8.0	8.5	14.5	13.0	14.0	18.5	16.0	17.0
2	4.0	1.5	3.5	9.5	8.0	8.5	14.5	13.5	14.0	19.0	16.5	18.0
3	5.0	3.5	4.0	9.0	8.0	8.5	14.5	12.0	14.0	19.0	18.0	18.5
4	5.0	4.0	4.5	9.5	8.5	9.0	13.5	12.0	13.0	19.0	18.0	18.5
5	6.0	4.0	5.0	9.5	9.0	9.5	13.5	10.5	12.0	20.0	18.0	18.5
6	4.5	3.5	4.0	9.5	8.5	9.0	12.0	10.0	11.0	20.5	18.5	19.5
7	4.0	3.0	3.5	9.5	8.0	8.5	13.0	10.0	11.5	20.5	19.0	20.0
8	4.0	2.0	3.5	9.5	7.0	8.5	14.0	11.0	13.0	20.5	19.0	20.0
9	4.0	3.0	3.5	9.5	8.0	9.0	14.5	11.5	13.5	20.0	18.5	19.5
10	5.0	3.5	4.5	10.5	8.5	9.5	15.0	13.0	14.0	18.5	16.5	18.0
11	5.5	4.5	5.0	11.5	10.0	10.5	15.5	13.5	14.5	18.0	16.0	17.0
12	7.0	5.5	6.0	13.0	11.0	12.0	16.5	14.0	15.5	19.0	17.0	18.0
13	7.0	6.0	5.5	12.0	10.5	11.5	16.5	15.0	16.0	19.0	18.0	18.5
14	6.5	5.5	6.0	12.0	10.0	11.0	16.5	15.0	16.0	19.0	18.0	18.5
15	6.5	5.5	6.0	12.0	10.5	11.5	17.0	15.0	16.0	19.5	18.0	19.0
16	6.0	5.0	5.5	13.5	11.0	12.0	18.0	15.5	16.5	20.5	19.0	19.5
17	6.0	4.5	5.5	12.0	11.0	11.5	18.0	16.0	16.5	20.5	19.0	20.0
18	6.5	5.5	6.0	13.0	11.0	12.0	18.5	17.0	18.0	21.0	19.5	20.0
19	7.0	6.0	6.5	13.0	11.0	11.5	19.0	17.0	18.5	21.5	19.5	20.5
20	7.0	6.0	6.5	13.5	11.0	12.0	19.0	17.0	18.5	21.5	20.0	21.0
21	6.5	5.5	6.0	13.0	11.0	11.5	18.5	18.0	18.0	21.5	20.0	21.0
22	8.0	5.5	6.5	11.5	10.5	11.0	18.5	17.0	18.0	21.0	19.5	20.5
23	8.5	7.0	8.0	10.5	9.0	10.0	18.5	17.0	18.0	21.0	19.5	20.5
24	9.0	8.0	8.5	11.0	9.5	10.5	18.0	16.5	17.0	21.0	20.0	20.5
25	9.5	8.5	9.0	11.5	10.0	11.0	16.5	15.5	16.0	21.5	20.5	21.0
26	10.5	9.0	10.0	12.0	10.5	11.5	15.5	14.5	15.0	22.0	20.0	21.0
27	11.0	10.0	10.5	13.5	11.5	12.0	16.0	14.0	15.0	22.0	20.5	21.5
28	10.0	8.5	9.5	13.5	12.0	13.0	16.5	14.5	15.5	23.0	19.0	21.5
29	---	---	---	13.5	11.5	13.0	17.0	16.0	16.5	21.0	19.0	20.5
30	---	---	---	15.5	13.5	14.5	18.0	16.0	17.0	22.0	21.0	21.5
31	---	---	---	15.5	13.5	14.5	---	---	---	23.0	21.5	23.0
MONTH	11.0	1.5	6.0	15.5	7.0	11.0	19.0	10.0	15.5	23.0	16.0	19.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.0	21.5	23.0	25.0	24.0	24.5	---	---	---	26.0	24.0	25.5
2	23.0	21.0	22.0	25.0	23.0	24.0	---	---	---	25.5	24.5	25.0
3	23.0	20.5	21.5	24.5	23.0	24.0	---	---	---	26.0	24.0	25.0
4	22.0	20.0	21.5	25.0	22.0	24.0	---	---	---	26.0	24.0	25.0
5	23.0	20.5	21.5	25.0	23.0	24.5	---	---	---	25.5	24.0	25.0
6	23.5	21.0	22.0	25.5	23.5	24.5	---	---	---	25.5	24.0	24.5
7	22.0	20.5	21.5	26.0	24.0	25.0	---	---	---	24.5	23.5	24.0
8	20.5	19.0	20.0	26.5	24.5	25.5	---	---	---	24.5	23.0	23.5
9	21.0	19.0	20.0	26.5	25.0	25.5	---	---	---	24.0	22.0	23.5
10	20.5	19.0	20.0	26.5	24.5	25.5	26.5	24.5	25.0	24.5	23.0	23.5
11	21.0	19.0	20.0	25.5	24.5	25.0	26.5	24.5	25.5	23.5	21.0	23.0
12	23.0	20.0	21.5	25.5	24.0	25.0	26.5	24.5	25.5	22.0	20.5	21.5
13	24.0	21.5	23.0	26.0	24.0	25.0	26.5	24.5	25.5	23.0	21.0	22.0
14	23.0	21.5	22.0	26.5	24.5	25.5	25.5	24.0	24.5	23.5	21.0	22.0
15	23.0	21.0	21.5	27.0	25.0	26.0	26.0	24.5	25.0	24.0	21.0	22.0
16	23.5	21.0	23.0	26.5	25.0	25.5	28.0	25.0	26.0	23.0	21.5	22.0
17	23.0	21.5	22.0	26.5	24.5	25.5	25.5	24.0	24.5	23.0	21.5	22.0
18	23.5	21.0	23.0	26.0	24.5	25.5	25.5	24.0	24.5	23.0	21.5	22.0
19	24.5	22.0	23.5	26.5	24.5	25.5	24.5	23.5	24.0	22.0	21.0	22.0
20	24.5	23.0	23.5	26.0	24.5	25.0	25.0	23.0	24.0	23.0	21.5	22.0
21	25.0	23.0	24.0	26.0	24.0	25.0	24.5	23.0	24.0	22.0	21.0	21.5
22	25.0	23.5	24.0	25.5	24.5	24.5	25.0	23.5	24.0	21.0	20.0	20.5
23	25.0	23.0	24.0	26.0	24.0	25.0	25.0	23.5	24.5	21.0	19.5	20.5
24	25.0	22.0	24.0	25.5	24.5	25.0	25.0	23.0	24.0	21.5	20.5	21.0
25	23.0	21.5	22.0	25.5	24.5	24.5	25.5	23.5	24.5	20.5	19.5	20.5
26	24.5	22.0	23.5	25.5	24.0	24.5	25.5	24.0	25.0	20.5	19.5	20.0
27	24.5	23.0	24.0	25.5	23.5	24.5	25.5	23.5	24.5	20.5	20.0	20.0
28	25.0	23.0	24.5	24.5	23.0	24.0	25.5	23.5	24.5	20.5	19.5	20.0
29	25.0	23.5	24.5	23.5	23.0	23.0	25.5	23.5	24.5	19.5	19.0	19.5
30	25.5	23.5	25.0	24.5	22.0	23.5	25.5	23.5	24.5	19.5	19.0	19.0
31	---	---	---	25.0	23.5	24.0	25.5	23.5	24.5	---	---	---
MONTH	25.5	19.0	22.5	27.0	22.0	25.0	---	---	---	26.0	19.0	22.5
YEAR	28.0	1.5	15.0									

03597850 DUCK RIVER AT SHELBYVILLE WATERWORKS, NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'24", long 86°27'50", Bedford County, Hydrologic Unit 06040002, 1.3 mi (2.1 km) downstream from bridge on State Route 82, 1.6 mi (2.6 km) upstream from bridge on U. S. Highway 231, 1.6 mi (2.6 km) upstream from bridge on U. S. Highway 231, 1.6 mi (2.6 km) east of Royal, and at mile 222.0 (357.2 km).

DRAINAGE AREA.--425 mi^2 (1,101 km^2).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Flow regulated by Normandy Lake (station 03596460) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
05...	1045	172	170	7.3	19.0	20	4	7.4	6	1.6	480
NOV											
09...	1145	445	170	6.9	9.5	5	2	9.6	6	--	2500
DEC											
07...	1125	805	160	6.8	8.0	7	4	10.9	5	1.1	700
JAN											
12...	1225	1400	200	7.8	2.8	5	3	13.0	5	1.0	800
FEB											
08...	1023	170	200	7.6	1.2	7	1	17.1	5	--	<10
MAR											
09...	1045	1550	160	7.6	8.9	7	6	11.4	7	--	800
APR											
06...	1050	6570	130	7.0	12.0	12	30	10.2	--	<1.0	1500
MAY											
11...	0750	248	220	7.1	18.0	10	26	7.9	--	--	1190
JUN											
01...	1730	207	140	7.9	27.0	17	12	10.2	7	6.1	220
07...	1600	--	--	8.1	24.0	--	12	7.1	--	--	--
15...	1520	--	140	7.5	21.5	--	8	8.8	--	--	--
22...	1415	--	--	7.0	28.0	--	9	7.8	--	--	--
JUL											
07...	1045	--	150	7.0	29.0	12	4	6.0	--	1.9	--
AUG											
09...	0915	--	120	7.2	26.0	9	5	10.2	9	1.3	360
SEP											
07...	1000	--	120	7.5	22.0	20	11	7.2	7	1.2	560

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL FLUORIDE (F) (MG/L)
OCT										
05...	50	22	4.4	--	4.6	87	71	<1.0	4.0	<.1
NOV										
09...	410	24	4.0	3.4	1.0	80	66	1.0	3.0	<.1
DEC										
07...	<100	26	3.2	2.7	1.0	83	68	7.0	4.0	<.1
JAN										
12...	40	34	3.7	2.5	1.2	112	92	10	4.0	<.1
FEB										
08...	<10	34	3.9	1.8	.9	104	85	12	5.0	<.1
MAR										
09...	50	--	--	--	--	74	61	--	--	--
APR										
06...	400	21	2.7	1.5	1.4	60	49	8.0	4.0	<.1
MAY										
11...	20	--	--	--	--	115	94	--	--	--
JUN										
01...	30	25	2.8	2.6	1.4	70	57	7.0	7.0	<.1
07...	--	--	--	--	--	--	--	--	--	--
15...	--	18	2.4	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	68	56	--	--	--
AUG										
09...	90	--	--	--	--	63	52	--	--	--
SEP										
07...	30	19	2.3	1.9	1.2	56	46	5.0	4.0	<.1

03597850 DUCK RIVER AT SHELBYVILLE WATERWORKS, NEAR SHELBYVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT										
05...	4.6	100	.14	46.4	12	.66	.07	.13	.10	.06
NOV										
09...	3.6	--	--	--	4	.40	.09	.22	.05	.01
DEC										
07...	2.8	110	.15	239	8	.45	.08	.14	.05	.03
JAN										
12...	3.3	90	.12	340	5	.82	.06	.11	.05	--
FEB										
08...	1.5	100	.14	45.9	<1	.37	.01	.12	.02	.02
MAR										
09...	--	--	--	--	10	.61	.08	.07	.05	--
APR										
06...	--	80	.11	1420	51	.60	.07	.19	.11	.01
MAY										
11...	--	--	--	--	17	.66	.03	.27	.10	--
JUN										
01...	--	90	.12	50.3	14	.31	.13	.31	.08	--
07...	--	--	--	--	--	.42	.07	.19	.04	.02
15...	--	--	--	--	--	.35	.02	.19	.06	.02
22...	--	--	--	--	--	.49	.03	.08	.06	.03
JUL										
07...	--	--	--	--	--	.46	.05	.14	.09	--
AUG										
09...	--	--	--	--	--	.51	.13	.07	.09	--
SEP										
07...	--	70	.10	--	16	.54	.04	.12	.10	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
OCT										
05...	700	<5	<100	<10	100	--	--	140	1100	610
NOV										
09...	--	--	--	--	--	--	--	--	160	--
DEC										
07...	--	--	--	--	--	--	--	--	200	<50
JAN										
12...	400	<2	<100	<10	100	<1	<5	30	560	<50
FEB										
08...	--	--	--	--	--	--	--	--	110	<50
MAR										
09...	--	--	--	--	--	--	--	--	820	<50
APR										
06...	1900	<2	<100	<10	160	<1	9	<10	790	100
MAY										
11...	--	--	--	--	--	--	--	--	590	70
JUN										
01...	<200	<2	<100	<10	50	4	<5	10	210	180
07...	--	--	--	--	--	--	--	--	430	150
15...	--	--	--	--	--	--	--	--	590	<50
22...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	--	--	--	450	<50
AUG										
09...	--	--	--	--	--	--	--	--	450	260
SEP										
07...	900	<2	<100	<10	40	<1	<5	<10	840	500

03597850 DUCK RIVER AT SHELBYVILLE WATERWORKS, NEAR SHELBYVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LEAD (PB) (UG/L)	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
05...	--	10	80	60	<.2	<50	<1	--	70	2.9
NOV										
09...	--	--	50	--	--	--	--	--	--	2.7
DEC										
07...	--	--	90	30	--	--	--	--	--	1.9
JAN										
12...	<10	<10	80	<10	<.2	<50	1	<10	<10	2.4
FEB										
08...	--	--	50	10	--	--	--	--	--	--
MAR										
09...	--	--	80	50	--	--	--	--	--	--
APR										
06...	<10	<10	200	20	.2	<50	<1	<10	20	3.2
MAY										
11...	--	--	90	50	--	--	--	--	--	3.6
JUN										
01...	<10	<10	50	30	<.2	<50	<1	<10	300	3.4
07...	--	--	80	20	--	--	--	--	--	4.8
15...	--	--	40	<10	--	--	--	--	--	4.7
22...	--	--	--	--	--	--	--	--	--	1.6
JUL										
07...	--	--	60	10	--	--	--	--	--	--
AUG										
09...	--	--	50	20	--	--	--	--	--	--
SEP										
07...	<10	<10	60	30	<.2	<50	<2	<10	<10	2.5

03598000 DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, Hydrologic Unit 06040002, on right bank 150 ft (50 m) downstream from Sims Bridge, 2.1 mi (3.4 km) upstream from Sugar Creek, 2.2 mi (3.5 km) west of Shelbyville, 2.9 mi (4.7 km) downstream from Flat Creek, and at mile 216.2 (347.9 km).

DRAINAGE AREA.--481 mi^2 (1,246 km^2)

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year. Prior to April 1934 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1934. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.51 ft (208.334 m) above mean sea level. Prior to Sept. 2, 1966, at datum 2.0 ft (0.6 m) higher.

REMARKS.--Records good. Prior to 1948 diurnal fluctuation caused by powerplant upstream. Flow regulated by Normandy Reservoir (station 03596460) since January 1976. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--44 years, 822 ft^3/s (23.28 m^3/s), 23.21 in/yr (590 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft^3/s (1,780 m^3/s) Feb. 13, 1948, gage height, 38.40 ft (11.704 m), present datum, from floodmarks, from rating curve extended above 35,000 ft^3/s (991 m^3/s) on basis of slope-area measurement of peak flow; minimum, 5.0 ft^3/s (0.14 m^3/s) Aug. 23, 1936; minimum daily, 20 ft^3/s (0.57 m^3/s) Sept. 2, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 39.6 ft (12.07 m) present datum, discharge, about 70,000 ft^3/s (1,980 m^3/s), from high water profile by Tennessee Valley Authority. Flood in March 1902 reached a stage about 2.0 ft (0.61 m) higher than that in March 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,500 ft^3/s (439 m^3/s) Apr. 4, gage height, 24.68 ft (7.522 m); minimum, 138 ft^3/s (3.91 m^3/s) Sept. 17; minimum daily, 154 ft^3/s (4.36 m^3/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	943	1140	534	259	1280	207	692	202	205	182	167
2	217	791	1100	472	213	1110	210	476	197	237	179	157
3	202	717	1010	441	199	1230	523	430	220	210	177	157
4	198	660	938	426	212	9990	11400	390	205	195	174	169
5	193	610	877	687	224	5260	13000	333	202	190	174	172
6	224	574	834	1050	214	3770	8540	280	202	187	169	174
7	265	558	939	1540	200	3310	5250	265	202	187	167	197
8	231	526	1030	1110	192	2930	3970	350	197	182	172	215
9	274	511	897	1490	189	2010	2970	267	205	207	179	192
10	352	628	830	2320	190	1160	2530	260	205	222	174	169
11	260	663	792	1520	187	1030	2400	250	192	187	200	159
12	232	663	1220	1520	201	7190	1820	240	190	182	195	157
13	215	644	1300	1400	267	7340	1030	227	195	177	169	154
14	206	642	1060	1340	253	2920	476	217	202	184	237	222
15	203	641	898	1570	214	3380	314	212	200	190	230	595
16	199	942	816	1120	192	3090	270	207	169	190	222	257
17	196	952	749	925	206	2790	265	200	215	190	210	154
18	193	945	701	757	187	1820	262	192	290	195	200	212
19	190	930	664	624	202	810	255	187	227	179	227	197
20	220	915	649	605	207	771	247	192	205	184	184	215
21	257	893	646	537	201	692	240	215	215	172	169	225
22	232	872	613	501	199	655	295	207	210	200	162	304
23	193	851	323	486	237	615	1060	240	205	184	159	240
24	200	836	255	338	4250	587	1000	240	215	182	177	182
25	4800	823	264	514	1870	414	751	220	377	195	202	480
26	4150	829	491	370	1330	282	548	210	655	184	187	1020
27	1460	920	392	476	1520	235	398	215	311	184	174	387
28	1490	981	498	517	1330	227	311	230	237	179	167	292
29	1940	1430	539	453	---	260	272	227	210	190	184	245
30	1320	1130	508	403	---	242	285	225	192	197	167	379
31	1490	---	673	392	---	227	---	217	---	190	169	---
TOTAL	22105	24022	23046	25538	15145	67677	59359	8313	6959	5917	5778	7845
MEAN	713	801	743	824	541	2183	1979	268	232	191	186	262
MAX	4800	1430	1300	2320	4250	9990	13000	692	655	237	260	1020
MIN	190	511	255	286	187	227	207	187	169	184	159	154
(†)	+700	-12900	-7200	+2800	+4400	+2400	+7400	+3300	-1300	-3000	-2400	0
MEAN‡	736	371	531	914	698	2261	2225	375	189	94.1	109	262
CFSM‡	1.53	.77	1.10	1.90	1.45	4.70	4.63	.78	.39	.20	.23	.54
IN.‡	1.76	.86	1.27	2.19	1.51	5.42	5.16	.90	.44	.23	.26	.61

CAL YR 1976 TOTAL 234161 MEAN 640 MAX 4800 MIN 157 MEAN‡ 739 CFSM‡ 1.54 IN.‡ 20.91
WTR YR 1977 TOTAL 272304 MEAN 746 MAX 13000 MIN 154 MEAN‡ 731 CFSM‡ 1.52 IN.‡ 20.64

† Change in contents, in cfs-days, in Normandy Lake.
‡ Adjusted for change in contents.

03598000 DUCK RIVER NEAR SHELBYVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: April 1976 to current year.

INSTRUMENTATION.--Temperature recorder since April 1976.

REMARKS.--No record June 25 to July 5, instrument malfunction.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C July 9, 14-19, 21, 1977; minimum, 0.0°C Jan. 1-3, 17-23, Jan. 30 to Feb. 2, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 28.0°C July 9, 14-19, 21; minimum 0.0°C Jan. 1-3, 17-23, Jan 30 to Feb 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	17.0	18.0	13.0	12.0	12.0	6.5	5.5	6.0	1.5	0.0	1.0
2	18.5	16.5	18.0	13.0	11.5	12.0	8.5	6.5	8.0	0.5	0.0	0.5
3	19.0	16.5	18.0	13.0	12.0	12.0	7.0	6.0	6.5	0.5	0.0	0.5
4	19.5	18.0	18.5	13.0	11.0	12.0	7.0	6.0	6.5	2.0	0.5	1.5
5	19.5	18.5	19.0	11.5	10.0	11.0	7.0	6.0	6.5	4.5	2.0	3.0
6	19.5	18.0	19.0	11.0	10.0	10.5	7.0	6.5	7.0	4.5	4.5	4.5
7	18.5	16.5	18.0	11.5	9.5	10.5	7.0	6.5	7.0	5.0	4.5	4.5
8	16.5	15.5	16.0	10.5	9.5	10.0	6.5	5.0	6.0	4.5	4.0	4.5
9	16.0	14.5	15.5	10.5	9.5	10.0	5.0	4.5	5.0	5.0	4.5	4.5
10	16.0	14.0	15.0	11.5	10.0	11.0	6.0	5.0	5.5	4.5	3.5	4.0
11	16.0	14.0	15.0	11.0	9.5	10.5	7.0	6.0	6.5	3.5	2.0	3.0
12	16.0	14.0	15.5	10.0	8.5	9.5	8.5	7.0	8.0	3.0	1.5	2.0
13	16.5	15.0	16.0	9.5	8.5	9.0	8.5	6.5	8.0	3.0	2.0	3.0
14	16.5	15.0	16.0	9.0	8.5	9.0	6.5	6.0	6.5	4.5	3.0	4.0
15	17.0	15.5	16.5	9.5	9.0	9.5	8.0	6.0	7.0	4.5	4.0	4.5
16	16.0	15.0	15.5	11.0	9.5	10.0	8.0	6.5	7.0	4.5	1.5	3.5
17	15.5	13.5	15.0	11.0	9.0	10.5	6.5	6.0	6.0	1.5	0.0	0.5
18	15.0	13.5	14.5	10.5	9.0	10.0	6.5	6.0	6.0	0.0	0.0	0.0
19	14.5	13.5	14.0	11.0	10.0	10.5	7.0	6.0	6.5	0.0	0.0	0.0
20	13.5	13.0	13.5	11.0	9.5	10.5	7.0	6.0	6.5	0.0	0.0	0.0
21	14.0	13.0	13.5	10.0	9.0	9.5	6.0	3.5	5.0	0.5	0.0	0.0
22	13.5	11.5	13.0	9.5	8.5	9.0	3.5	3.0	3.5	0.5	0.0	0.0
23	13.0	12.0	13.0	8.5	8.0	8.0	3.5	2.0	3.0	1.0	0.0	0.5
24	14.0	13.0	13.5	9.0	8.0	8.5	3.5	1.5	3.0	1.0	0.5	0.5
25	15.0	13.5	14.5	9.5	9.0	9.5	3.5	3.0	3.0	2.0	1.0	1.5
26	15.0	13.5	14.5	10.5	9.5	10.0	4.0	3.0	3.5	3.5	1.5	2.0
27	13.5	12.0	13.0	11.5	10.5	11.0	4.5	3.0	4.0	4.5	3.0	3.5
28	13.5	12.0	13.0	11.0	8.0	9.5	5.0	4.0	4.5	4.5	3.0	3.5
29	14.0	13.0	13.5	8.0	5.5	6.5	5.5	4.0	4.5	3.0	1.0	1.5
30	14.0	13.5	14.0	6.0	5.5	5.5	5.0	3.0	4.0	1.0	0.0	0.5
31	13.5	12.0	13.0	---	---	---	3.5	1.5	2.0	1.0	0.0	0.5
MONTH	19.5	11.5	15.5	13.0	5.5	10.0	8.5	1.5	5.5	5.0	0.0	2.0

03598000 DUCK RIVER NEAR SHELBYVILLE, TN--Continued
TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.5	0.0	0.5	8.5	7.0	8.0	16.5	15.0	15.5	19.0	17.0	18.0
2	1.5	0.0	1.0	8.0	6.0	7.0	17.0	16.0	16.5	20.0	18.0	19.0
3	1.5	1.0	1.0	8.0	6.5	7.0	16.0	14.0	15.5	20.5	18.5	19.5
4	3.5	1.0	2.0	10.0	8.0	9.0	14.0	13.5	14.0	20.5	19.5	20.0
5	4.0	3.0	3.5	10.5	9.0	9.5	14.0	11.0	12.0	22.0	19.5	20.5
6	4.0	2.0	3.0	9.0	8.0	8.5	12.0	10.5	11.5	23.0	20.0	21.5
7	3.0	1.5	2.0	8.0	7.0	8.0	13.5	11.5	13.0	23.0	21.0	22.0
8	2.0	1.0	1.5	8.0	7.0	8.0	13.5	13.0	13.5	23.0	21.5	22.0
9	3.0	0.5	1.5	8.5	8.0	8.0	14.0	13.0	13.5	22.0	20.0	21.0
10	3.5	1.0	2.0	10.5	8.5	9.0	14.5	13.5	14.0	21.0	19.0	20.0
11	4.5	2.0	3.5	11.0	10.0	10.5	15.0	14.0	14.5	20.5	18.5	19.5
12	6.0	4.0	5.0	13.5	10.5	12.0	15.5	15.0	15.0	20.5	18.0	19.5
13	7.0	5.0	6.0	13.0	10.5	11.5	16.5	15.0	16.0	20.5	18.0	19.5
14	7.0	5.5	6.5	11.5	11.0	11.0	18.5	15.5	17.0	20.5	18.5	20.0
15	6.5	5.0	5.5	11.0	10.0	10.5	19.5	16.0	18.0	21.5	19.0	20.5
16	5.5	4.5	5.0	11.0	10.0	10.5	20.0	17.0	19.0	22.0	20.0	21.0
17	5.0	3.5	4.5	10.5	9.5	10.0	20.0	18.0	19.0	23.0	21.0	21.5
18	5.5	4.0	5.0	12.0	10.0	11.0	20.0	18.5	19.5	23.0	21.0	22.0
19	5.5	4.0	5.0	13.0	11.5	12.0	20.5	19.0	20.0	23.5	21.5	23.0
20	6.0	4.5	5.5	13.0	11.0	11.5	20.5	19.0	20.0	23.5	21.5	23.0
21	6.5	4.5	5.5	11.5	11.0	11.5	20.0	19.0	19.5	24.0	21.5	23.0
22	7.0	5.0	6.0	11.5	10.0	11.0	19.5	19.0	19.5	23.0	21.0	23.0
23	8.5	6.5	7.0	11.5	9.5	10.5	19.0	18.0	18.5	23.0	21.0	22.0
24	9.5	8.5	9.0	12.0	9.5	10.5	18.5	17.0	18.0	22.0	20.5	21.5
25	10.5	9.5	10.0	13.5	10.5	11.5	18.0	16.0	17.0	21.5	21.0	21.5
26	11.5	10.0	11.0	14.0	10.5	11.5	16.5	15.0	16.0	23.0	21.0	22.0
27	11.0	9.5	10.5	14.5	12.0	13.5	17.0	14.5	15.5	23.0	21.0	22.0
28	9.5	8.0	9.0	14.5	13.5	14.0	17.0	15.0	16.0	23.5	21.5	22.0
29	---	---	---	16.0	13.5	15.0	17.0	16.0	16.5	24.0	21.5	23.5
30	---	---	---	18.0	15.0	16.5	18.5	16.5	18.0	25.0	23.0	24.5
31	---	---	---	18.0	15.5	16.5	---	---	---	26.0	24.0	25.0
MONTH	11.5	0.0	5.0	18.0	6.0	11.0	20.5	10.5	16.5	26.0	17.0	21.5

	JUNE			JULY			AUGUST			SEPTEMBER		
1	25.5	24.0	25.0	---	---	---	25.5	24.0	24.5	26.0	24.5	25.0
2	25.5	23.5	24.5	---	---	---	26.5	24.0	25.5	26.0	24.5	25.0
3	24.5	23.0	24.0	---	---	---	26.0	24.5	25.5	26.0	24.5	25.5
4	24.5	22.0	23.5	---	---	---	26.0	25.0	25.5	25.5	24.5	25.0
5	24.5	21.5	23.5	---	---	---	26.5	25.0	26.0	25.5	24.0	25.0
6	24.5	23.0	24.0	26.5	24.5	25.5	27.0	25.0	26.0	25.0	24.0	24.5
7	23.5	21.5	23.0	27.0	25.0	26.0	27.0	25.5	26.5	24.0	23.0	23.5
8	23.0	20.5	22.0	27.0	25.0	26.5	28.0	26.0	27.0	24.5	22.0	23.5
9	23.0	20.5	21.5	28.0	25.5	26.5	28.0	26.0	27.0	23.5	21.5	23.0
10	21.5	19.5	20.5	26.5	25.5	26.0	28.0	25.5	26.5	23.5	22.0	23.0
11	23.0	20.0	21.5	26.5	25.0	26.0	28.0	25.5	27.0	23.5	21.0	22.0
12	24.0	21.0	23.0	26.5	25.0	26.0	27.0	25.5	26.5	24.0	21.0	22.0
13	24.5	22.0	24.0	27.0	25.5	26.5	27.0	25.5	26.5	23.5	22.0	23.0
14	24.0	23.5	23.5	28.0	25.5	26.5	26.0	25.0	25.5	22.0	21.5	22.0
15	24.0	23.0	23.5	28.0	25.5	27.0	26.0	24.0	25.5	22.0	21.0	21.5
16	24.5	23.0	24.0	28.0	25.5	27.0	25.5	23.5	25.0	21.5	20.5	21.0
17	24.0	22.0	23.0	28.0	26.0	27.0	25.5	24.5	25.0	23.5	21.5	23.0
18	24.5	22.0	23.5	28.0	25.5	26.5	25.5	24.0	24.5	23.5	21.5	23.0
19	24.0	22.0	23.5	28.0	26.0	26.5	24.5	23.0	23.5	23.5	22.0	23.0
20	24.5	23.0	24.0	27.0	26.0	26.5	24.5	23.0	24.0	24.0	22.0	23.5
21	25.0	23.0	24.5	28.0	26.0	27.0	24.5	23.0	24.0	23.0	21.0	22.0
22	25.0	24.0	24.5	27.0	26.0	26.0	25.0	23.5	24.5	22.0	20.5	21.0
23	25.5	24.0	24.5	27.0	25.0	26.0	25.0	23.5	24.5	21.5	20.0	21.0
24	26.0	24.0	25.0	26.0	25.0	25.5	25.0	24.0	24.5	21.5	20.5	20.5
25	---	---	---	25.5	25.0	25.5	25.5	23.5	24.5	20.5	20.5	20.5
26	---	---	---	26.0	24.5	25.5	25.5	24.0	25.0	20.5	19.5	20.0
27	---	---	---	26.0	24.0	25.0	25.5	24.5	25.0	21.0	20.0	20.5
28	---	---	---	25.0	24.0	24.5	25.5	24.5	25.0	21.0	19.5	20.5
29	---	---	---	24.0	23.5	24.0	26.0	24.5	25.5	20.0	19.5	19.5
30	---	---	---	25.0	23.5	24.5	26.0	24.5	25.5	19.5	19.0	19.5
31	---	---	---	25.0	23.5	24.5	26.0	24.5	25.5	---	---	---
MONTH	26.0	19.5	23.5	28.0	23.5	26.0	28.0	23.0	25.5	26.0	19.0	22.5
YEAR	28.0	0.0	15.0									

03599460 DUCK RIVER NEAR COLUMBIA, TN

LOCATION.--Lat 35°35'53", long 86°57'27", Maury County, Hydrologic Unit 06040002, on right bank on Sowell Mill Pike, 0.8 mi (1.3 km) west of Union Grove School, 5.4 mi (8.7 km) east of Columbia, and at mile 141.1 (227.0 km).

DRAINAGE AREA.--1,176 mi^2 (3,046 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1973 to current year.

INSTRUMENTATION.--Temperature recorder since November 1973.

REMARKS.--Temperature recorder clock stopped July 1-5 (range in temperature 24.0 to 28.0°C).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 33.0°C July 15-17, 1977; minimum, 0.5°C Jan. 22, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 33.0°C July 15-17; minimum, 0.5°C Jan. 22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	20.0	20.5	13.5	13.0	13.5	8.5	7.0	8.0	4.0	2.0	3.0
2	20.5	20.0	20.5	13.5	12.0	13.0	8.0	7.0	7.0	3.0	2.0	2.0
3	20.5	20.0	20.5	13.5	12.0	13.0	7.0	6.0	6.5	2.0	1.5	1.5
4	21.0	20.5	20.5	13.5	12.0	13.0	8.0	6.5	7.0	3.0	1.5	2.0
5	21.5	20.5	21.0	12.0	11.0	11.5	8.0	6.5	7.0	4.0	3.0	3.5
6	21.0	20.0	21.0	11.5	10.5	11.0	8.0	7.0	8.0	4.0	4.0	4.0
7	20.0	18.5	19.5	11.5	10.5	11.0	8.0	8.0	8.0	5.0	4.0	4.5
8	18.5	17.0	18.5	11.0	10.0	10.5	8.0	7.0	7.0	5.0	5.0	5.0
9	17.0	17.0	17.0	10.5	9.5	10.0	7.0	6.5	7.0	5.0	5.0	5.0
10	17.0	16.5	16.5	11.0	10.0	10.5	8.0	6.5	7.0	5.5	5.0	5.5
11	17.0	16.5	16.5	11.0	10.0	11.0	8.0	7.0	8.0	5.0	4.0	4.5
12	17.0	16.5	16.5	10.0	9.0	9.5	9.0	8.0	8.5	4.5	3.5	4.0
13	17.0	16.5	17.0	9.0	8.5	9.0	9.5	9.0	9.0	4.0	3.0	3.5
14	18.0	17.0	17.0	9.0	8.5	9.0	9.5	9.0	9.5	4.5	3.5	4.0
15	18.0	17.0	17.0	9.0	8.5	9.0	9.5	9.0	9.5	5.5	4.5	5.0
16	18.0	17.0	17.0	9.0	8.5	9.0	9.5	9.0	9.0	5.5	5.0	5.0
17	17.0	16.0	16.5	9.5	8.5	9.0	9.0	8.5	8.5	5.0	3.5	4.0
18	16.0	15.0	15.5	10.0	8.5	9.5	9.0	8.5	8.5	3.5	2.0	3.0
19	15.5	14.5	15.0	11.0	9.5	10.0	9.5	8.5	9.0	2.0	1.5	1.5
20	15.0	14.5	15.0	11.0	11.0	11.0	9.5	9.0	9.5	1.5	1.0	1.5
21	14.5	14.0	14.5	11.0	10.0	10.5	9.0	6.5	8.0	1.5	1.0	1.0
22	14.0	13.5	13.5	10.5	10.0	10.0	6.5	5.0	5.5	1.0	0.5	1.0
23	14.0	13.5	13.5	10.0	9.0	9.5	5.0	3.5	4.5	1.5	1.0	1.0
24	14.0	13.5	14.0	9.5	9.0	9.5	4.0	3.0	4.0	2.0	1.5	2.0
25	15.5	14.0	15.0	9.5	9.0	9.5	3.5	3.5	3.5	3.0	2.0	3.0
26	15.5	15.0	15.5	10.5	9.5	10.0	4.5	3.5	4.0	3.5	2.0	3.0
27	15.0	14.5	15.0	11.5	10.5	11.0	4.5	4.0	4.5	4.5	3.5	4.0
28	14.5	13.5	14.0	11.5	10.0	11.0	6.0	4.5	5.0	4.5	4.0	4.0
29	13.5	12.0	13.0	10.0	9.5	9.5	6.0	5.0	5.0	3.5	2.0	3.0
30	13.0	12.0	13.0	9.5	8.5	9.0	5.0	4.0	4.5	3.0	1.5	2.0
31	13.5	13.0	13.5	---	---	---	5.0	4.0	4.0	2.0	2.0	2.0
MONTH	21.5	12.0	16.5	13.5	8.5	10.5	9.5	3.0	7.0	5.5	0.5	3.0

03599460 DUCK RIVER NEAR COLUMBIA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	1.5	1.5	10.5	9.5	10.0	17.0	15.0	16.0	18.0	16.5	17.0
2	1.5	1.0	1.5	10.0	9.0	9.5	16.0	15.0	15.5	18.5	18.0	18.0
3	3.0	1.5	2.0	9.5	9.0	9.5	16.0	15.5	16.0	20.5	18.5	19.5
4	3.5	3.0	3.0	10.0	9.0	9.5	15.5	13.5	14.5	20.5	20.0	20.0
5	4.5	3.5	4.0	10.5	9.5	10.0	14.0	13.5	14.0	22.0	20.0	21.0
6	4.0	3.0	3.5	10.5	10.5	10.5	14.0	12.0	13.0	23.0	21.5	22.0
7	3.5	2.0	3.0	10.5	9.5	10.0	12.0	11.0	11.5	23.0	22.0	23.0
8	2.0	1.5	2.0	10.0	8.5	9.5	13.5	12.0	13.0	23.0	22.0	23.0
9	3.0	2.0	2.0	9.5	9.0	9.5	14.5	13.0	13.5	23.0	21.0	22.0
10	4.0	3.0	3.5	10.5	9.5	9.5	15.0	13.0	14.0	22.0	20.0	21.0
11	4.5	4.0	4.0	11.0	10.5	10.5	15.5	14.0	15.0	21.0	19.5	20.0
12	6.0	4.5	5.5	14.0	11.0	13.0	16.5	15.0	15.5	20.5	19.5	20.0
13	6.5	6.0	6.0	14.0	13.5	14.0	16.5	15.5	16.0	21.0	19.0	20.5
14	6.5	6.0	6.0	14.0	12.0	13.0	18.0	16.0	16.5	20.5	20.5	20.5
15	6.5	6.0	6.0	13.5	12.0	13.0	18.5	16.5	18.0	21.5	20.5	21.0
16	6.0	5.5	5.5	13.5	12.0	13.0	19.0	17.0	18.5	21.5	21.0	21.5
17	5.5	5.0	5.0	13.0	11.5	12.0	19.5	18.5	19.0	23.0	21.5	22.0
18	6.5	5.0	5.5	13.0	11.5	12.0	19.5	18.5	19.0	23.5	23.0	23.0
19	7.0	6.5	6.5	13.0	11.5	12.0	19.5	19.0	19.5	23.5	23.0	23.5
20	7.0	6.0	6.5	13.5	12.0	12.0	20.0	19.0	19.5	24.0	23.5	24.0
21	6.0	5.5	6.0	13.5	12.0	13.0	20.0	19.5	20.0	24.5	24.0	24.5
22	6.5	5.5	6.0	13.0	11.5	12.0	19.5	18.5	19.0	24.5	24.5	24.5
23	9.5	6.5	8.0	13.0	11.0	11.5	18.5	17.0	18.0	24.5	23.5	24.0
24	9.5	9.0	9.0	13.0	11.0	11.5	18.0	17.0	17.0	24.0	23.5	23.5
25	10.0	9.5	9.5	13.0	11.0	12.0	18.0	16.5	16.5	23.5	23.0	23.5
26	11.5	10.0	10.5	13.5	12.0	13.0	16.5	15.5	16.0	23.5	23.0	23.5
27	12.0	11.0	11.5	14.0	13.5	13.5	16.0	15.0	15.5	24.0	23.0	23.5
28	11.0	10.5	11.0	15.0	14.0	14.5	16.5	15.5	16.0	24.5	24.0	24.5
29	---	---	---	15.5	14.5	15.0	17.0	16.0	16.5	25.0	24.5	24.5
30	---	---	---	17.0	15.5	16.0	18.0	16.5	17.0	25.5	25.0	25.5
31	---	---	---	17.0	16.5	17.0	---	---	---	26.0	25.5	26.0
MONTH	12.0	1.0	5.5	17.0	8.5	12.0	20.0	11.0	16.5	26.0	16.5	22.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.0	26.0	26.0	---	---	---	30.0	29.5	29.5	29.5	28.0	28.5
2	26.0	25.5	26.0	---	---	---	30.0	28.5	29.0	29.0	28.5	28.5
3	---	---	---	---	---	---	29.0	26.5	28.0	28.5	27.0	28.0
4	---	---	---	---	---	---	28.5	27.0	28.0	28.5	26.5	28.0
5	---	---	---	---	---	---	28.5	26.5	28.0	28.0	27.0	27.0
6	---	---	---	31.0	30.0	30.0	29.0	27.0	28.5	27.0	26.5	27.0
7	---	---	---	31.5	30.0	30.5	29.5	28.0	29.0	26.5	25.5	26.0
8	---	---	---	31.5	30.5	31.0	30.0	28.5	29.0	26.5	25.5	26.0
9	---	---	---	32.0	31.0	31.0	30.0	29.0	29.5	26.5	25.5	26.0
10	---	---	---	32.0	31.0	31.5	29.5	29.0	29.5	26.5	26.0	26.0
11	---	---	---	31.0	30.5	30.5	29.5	28.0	29.0	26.0	25.0	25.5
12	---	---	---	30.5	30.0	30.5	29.5	28.0	29.0	25.5	24.5	25.0
13	---	---	---	31.0	30.0	30.5	29.5	28.5	29.0	24.5	24.0	24.5
14	---	---	---	32.0	30.5	31.0	29.0	28.0	28.5	24.5	24.0	24.5
15	---	---	---	33.0	31.0	31.5	28.0	27.0	28.0	24.0	22.0	23.0
16	---	---	---	33.0	31.5	32.0	28.5	27.0	28.0	23.0	22.0	22.0
17	26.5	25.0	26.0	33.0	31.5	31.5	28.5	28.0	28.0	23.5	22.0	23.0
18	25.5	24.0	24.5	32.0	31.0	31.5	28.5	27.0	28.0	23.5	23.0	23.5
19	26.5	25.0	26.0	32.0	31.0	31.5	28.0	26.5	27.0	23.5	22.0	23.0
20	27.0	26.5	26.5	31.5	31.0	31.0	26.5	25.5	26.0	23.5	21.5	23.0
21	26.5	26.0	26.5	31.5	30.5	31.0	27.0	26.0	26.5	23.0	21.0	21.5
22	28.0	26.5	27.0	30.5	29.5	30.0	28.0	26.0	26.5	22.0	21.0	21.5
23	28.5	28.0	28.0	30.0	29.5	30.0	28.0	26.5	27.0	22.0	21.5	21.5
24	28.5	28.0	28.0	31.0	30.0	30.5	28.5	27.0	28.0	22.0	21.5	22.0
25	28.0	27.0	28.0	30.5	30.0	30.5	29.0	27.0	28.0	21.5	19.0	20.0
26	27.0	25.5	26.5	30.5	30.0	30.0	29.0	28.0	28.5	20.0	18.5	19.5
27	26.0	25.0	25.5	30.5	29.5	30.0	29.0	28.0	28.5	20.0	19.0	19.5
28	26.5	25.0	26.5	30.0	29.0	29.5	29.0	28.0	28.5	20.0	19.0	19.5
29	28.0	26.5	27.0	29.0	28.5	29.0	29.0	28.0	28.5	20.0	19.0	19.5
30	28.5	28.0	28.0	29.5	28.5	29.0	29.5	28.0	28.5	18.5	18.0	18.0
31	---	---	---	30.5	29.0	29.5	29.5	28.0	28.5	---	---	---
MONTH	---	---	---	33.0	28.5	30.5	30.0	25.5	28.0	29.5	18.0	23.5
YEAR	33.0	0.5	16.5									

03599482 DUCK RIVER AT COLUMBIA WATERWORKS, TN

LOCATION.--Lat 35°37'34", long 87°01'13", Maury County, Hydrologic Unit 06040003, 0.8 mi (1.3 km) downstream from Bear Creek, 1.1 mi (1.8 km) northeast of Columbia Courthouse, 3.8 mi (6.1 km) south of Darks Mill, and at mile 133.9 (215.4 km).

DRAINAGE AREA.--1,195 mi^2 (3,095 km^2).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Flow regulated by Normandy Lake (station 03596460).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
06...	1005	290	200	7.5	18.3	9	15	6.6	12	2.0	1200
NOV											
10...	0930	780	310	7.6	9.4	5	2	10.5	2	--	260
DEC											
08...	1015	1310	240	7.1	6.0	3	4	12.3	1	--	160
JAN											
13...	1045	3280	300	6.8	3.9	12	27	12.5	6	<1.0	620
FEB											
09...	1040	426	300	7.8	3.9	3	3	13.1	5	--	<10
MAR											
10...	0950	3860	220	6.0	10.6	4	6	9.2	5	--	660
APR											
05...	1135	20600	140	--	15.0	30	140	8.1	--	3.5	21400
MAY											
11...	1125	772	310	7.5	20.5	10	21	8.4	--	--	790
JUN											
08...	1245	278	250	8.0	25.6	7	9	7.0	4	2.6	--
23...	0800	--	--	7.5	27.5	--	12	6.9	--	--	--
JUL											
07...	1305	--	260	8.2	34.0	15	1	12.0	--	5.7	--
AUG											
09...	1155	--	180	7.8	31.0	8	3	11.3	15	3.7	890
SEP											
07...	1245	--	200	7.8	27.2	10	7	6.2	10	1.4	700

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	TOTAL MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT									
06...	460	43	6.8	4.8	1.4	109	89	3.0	5.0
NOV									
10...	<10	52	5.7	2.9	--	159	130	11	4.0
DEC									
08...	80	45	4.4	2.6	.9	146	120	14	4.0
JAN									
13...	140	55	4.6	1.9	1.2	134	110	16	5.0
FEB									
09...	<10	64	4.9	1.9	.9	159	130	15	2.0
MAR									
10...	660	--	--	--	--	121	99	--	--
APR									
05...	16000	--	--	--	--	80	66	--	--
MAY									
11...	<10	--	--	--	--	171	140	--	--
JUN									
08...	--	45	4.1	3.3	1.8	134	110	10	5.0
23...	--	--	--	--	--	--	--	--	--
JUL									
07...	--	--	--	--	--	146	120	--	--
AUG									
09...	780	--	--	--	--	98	80	--	--
SEP									
07...	100	41	3.2	4.2	1.9	111	91	8.0	6.0

03599482 DUCK RIVER AT COLUMBIA WATERWORKS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)
OCT											
06...	.1	4.3	130	.18	102	13	.56	.02	.20	.12	.20
NOV											
10...	<.1	5.8	180	.24	379	6	.72	.04	.10	.11	.08
DEC											
08...	<.1	2.4	160	.22	566	6	.48	.01	--	--	--
JAN											
13...	.1	4.6	180	.24	1590	17	1.0	.03	.17	.16	.42
FEB											
09...	<.1	.5	170	.23	196	2	.31	.02	.11	.07	.06
MAR											
10...	--	--	--	--	--	--	.49	.02	.10	.09	--
APR											
05...	--	--	--	--	--	--	.35	.07	.46	.60	--
MAY											
11...	--	--	--	--	--	5	.71	.04	.10	.10	--
JUN											
08...	.1	--	120	.16	90.1	12	.49	.01	.15	.14	.07
23...	--	--	--	--	--	--	.62	.02	.17	.20	.06
JUL											
07...	--	--	--	--	--	--	.70	.10	.23	.10	--
AUG											
09...	--	--	--	--	--	--	.06	.02	.23	.13	--
SEP											
07...	.1	--	130	.18	--	4	.25	.07	.59	.23	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT											
06...	900	<5	<100	<10	80	2	8	<10	940	<50	<10
NOV											
10...	--	--	--	--	--	--	--	--	240	<50	--
DEC											
08...	--	--	--	--	--	--	--	--	320	<50	--
JAN											
13...	1100	<2	<100	<10	140	<1	<5	60	1600	70	<10
FEB											
09...	--	--	--	--	--	--	--	--	130	<50	--
MAR											
10...	--	--	--	--	--	--	--	--	560	--	--
APR											
05...	--	--	--	--	--	--	--	--	5900	250	--
MAY											
11...	--	--	--	--	--	--	--	--	190	<50	--
JUN											
08...	300	<2	<100	<10	120	2	<5	<10	<50	100	<10
23...	--	--	--	--	--	--	--	--	--	--	--
JUL											
07...	--	--	--	--	--	--	--	--	290	<50	--
AUG											
09...	--	--	--	--	--	--	--	--	200	<50	--
SEP											
07...	600	<2	<100	<10	40	<1	<5	<10	280	<50	<10

03599482 DUCK RIVER AT COLUMBIA WATERWORKS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
06...	<10	90	50	.2	<50	<1	20	<1000	20	2.1
NOV										
10...	--	50	20	--	--	--	--	--	--	--
DEC										
08...	--	30	<10	--	--	--	--	--	--	--
JAN										
13...	<10	40	<10	<.2	<50	<1	<10	<1000	<10	--
FEB										
09...	--	30	<10	--	--	--	--	--	--	--
MAR										
10...	--	60	--	--	--	--	--	--	--	--
APR										
05...	--	490	<10	--	--	--	--	--	--	--
MAY										
11...	--	60	<10	--	--	--	--	--	--	5.8
JUN										
08...	<10	70	20	<.2	<50	<1	<10	<1000	<10	2.8
23...	--	--	--	--	--	--	--	--	--	2.8
JUL										
07...	--	40	<10	--	--	--	--	--	--	--
AUG										
09...	--	30	<10	--	--	--	--	--	--	--
SEP										
07...	<10	40	20	<.2	<50	<2	<10	<1000	<10	6.8

03599500 DUCK RIVER AT COLUMBIA, TN

LOCATION.--Lat 35°37'05",long 87°01'56", Maury County, Hydrologic Unit 06040003, on right bank 4 ft (1 m) downstream from bridge on former U. S. Highway 31, 2 blocks north of public square in Columbia, 0.7 mi (1.1 km) downstream from Columbia hydroelectric plant, 2.4 mi (3.9 km) upstream from Rutherford Creek, and at mile 132.8 (213.7 km).

DRAINAGE AREA.--1,208 mi^2 (3,129 km^2).

PERIOD OF RECORD.--October 1904 to December 1908, April 1920 to current year. Monthly discharge only for some periods, published in WSP 1306. Gage-height records collected at same site, 1887-95 and 1911 (fragmentary), and since 1947, are in reports of U. S. Weather Bureau.

REVISED RECORD.--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-22, 1923(M).

GAGE.--Water-stage recorder. Datum of gage is 535.33 ft (163.169 m) above mean sea level. Prior to Jan. 9, 1925, nonrecording gages near this site; all gages at datum 2.37 ft (0.722 m) higher prior to Oct. 1, 1933.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. Flow regulated by Normandy Lake (station 03596460) since Jan. 5, 1976.

AVERAGE DISCHARGE.-- 61 years, 1905-8, 1921-77,1,993 ft^3/s (56.44 m^3/s), 22.40 in/yr (569 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,500 ft^3/s (1,740 m^3/s) Mar. 17, 1973; maximum gage height, 51.75 ft (15.773 m) Feb. 14, 1948; no flow Oct. 22, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1902, reached a stage of 48.0 ft (14.63 m), present datum, discharge, 50,700 ft^3/s (1,440 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24,800 ft^3/s (702 m^3/s) Mar. 5 gage height, 33.20 ft (10.119 m); minimum, 135 ft^3/s (3.82 m^3/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	3590	1900	1590	819	4040	638	2070	308	347	193	142
2	296	2490	1670	1480	738	3040	587	1900	279	330	184	145
3	286	1810	1600	1230	590	3410	624	1600	243	462	178	148
4	253	1480	1460	1110	531	21000	8000	1280	219	381	172	140
5	234	1240	1350	1140	510	24600	20500	1190	254	302	166	137
6	294	1140	1050	2030	510	20000	23200	1050	236	254	166	200
7	296	956	1220	3340	496	8750	16700	909	225	229	163	193
8	356	868	1360	4000	456	5940	8560	1020	215	212	160	175
9	481	811	1540	3240	429	4880	6080	1300	209	206	157	190
10	514	781	1400	5140	406	3700	4520	1010	203	212	154	203
11	557	759	1290	5630	398	2710	3580	763	209	314	163	184
12	514	863	1400	3450	431	12900	3170	623	215	286	160	157
13	383	868	2340	2680	559	21600	2660	542	389	215	178	160
14	310	842	2560	3010	760	21400	1910	481	305	203	279	279
15	280	816	2020	4420	783	9570	1360	438	268	190	257	1060
16	257	806	1700	4090	683	5770	981	385	268	187	364	1060
17	248	889	1490	2720	588	4950	806	355	377	190	343	1110
18	234	1090	1330	2050	543	4310	712	327	466	190	283	632
19	225	1080	1210	1700	530	3280	654	308	605	229	250	610
20	248	1070	1120	1360	499	2180	584	302	562	215	268	869
21	253	1020	1050	1100	494	1740	550	299	389	206	229	712
22	299	993	963	931	479	1570	1530	305	485	239	181	505
23	334	962	941	831	875	1400	6380	314	420	257	166	377
24	510	941	839	809	11700	1280	9450	311	407	215	160	364
25	4360	920	643	951	11700	1180	5600	355	534	200	151	2320
26	11300	925	955	1420	6540	1080	3750	372	864	190	157	4850
27	9480	962	1420	1240	5320	888	2490	330	1640	187	172	3590
28	3850	1180	1270	1220	5630	743	1800	308	1200	181	169	1900
29	2400	1660	1070	1210	---	658	1460	305	689	181	157	1380
30	3210	2350	1090	1050	---	695	1250	330	462	181	148	1050
31	4930	---	1220	904	---	713	---	321	---	184	145	---
TOTAL	47472	36162	42471	67076	53997	199977	140086	21403	13145	7375	6073	24842
MEAN	1531	1205	1370	2164	1928	6451	4670	690	438	238	196	828
MAX	11300	3590	2560	5630	11700	24600	23200	2070	1640	462	364	4850
MIN	225	759	643	809	398	658	550	299	203	181	145	137
(†)	+700	-12900	-7200	+2800	+4400	+2400	+7400	+3300	-1300	-3000	-2400	0
MEAN‡	1554	775	1138	2254	2086	6528	4916	797	395	141	118	828
CFSM‡	1.29	.64	.94	1.87	1.73	5.40	4.07	.66	.33	.12	.10	.68
IN.‡	1.48	.72	1.09	2.15	1.80	6.23	4.54	.76	.36	.13	.11	.76

CAL YR 1976 TOTAL 599657 MEAN 1638 MAX 14300 MIN 150 MEAN ‡1738 CFSM‡ 1.44 IN.‡ 19.58
WTR YR 1977 TOTAL 660079 MEAN 1808 MAX 24600 MIN 137 MEAN ‡1794 CFSM‡ 1.48 IN.‡ 20.16

† Change in contents, in cfs-days, in Normandy Lake.
‡ Adjusted for change in contents.

03600500 BIG BIGBY CREEK AT SANDY HOOK, TN

LOCATION.--Lat 35°29'19", long 87°13'59", Maury County, Hydrologic Unit 06040003, on right bank 45 ft (14 m) west of Louisville and Nashville Railroad track, 0.2 mi (0.3 km) downstream from bridge on U. S. Highway 43, 0.4 mi (0.6 km) northeast of Sandy Hook, 0.5 mi (0.8 km) upstream from Dry Creek, 3.5 mi (5.6 km) southwest of Mount Pleasant, and at mile 17.9 (28.8 km).

DRAINAGE AREA.--17.5 mi^2 (45.3 km^2).

PERIOD OF RECORD.--September 1953 to current year.

REVISED RECORDS.--WRD Tenn. 1974: 1954(P), 1955, 1956-57(P), 1958(M), 1961(M), 1962-65(P), 1966(M), 1967-68(P), 1969(M), 1970(P), 1971(M), 1972-73(P).

GAGE.--Water-stage recorder. Datum of gage is 670.44 ft (204.350 m) above mean sea level.

REMARKS: Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--24 years, 28.1 ft^3/s (0.796 m^3/s), 21.81 in/yr (554 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft^3/s (218 m^3/s) Mar. 15, 1973, gage height, 11.55 ft (3.520 m), from rating curve extended above 1,400 ft^3/s (39.6 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 10, 1958, and July 9, 1959, caused by removal of gravel 0.2 mi (0.3 km) usptream; minimum natural discharge, 1.5 ft^3/s (0.042 m^3/s) Sept. 4-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 23	2130	1640	46.4	7.01	2.137	Mar. 12	0800	2940	83.3	8.52	2.597
Mar. 4	0130	*2950	83.5	8.53	2.600	Apr. 4	1515	890	25.2	5.57	1.698

Minimum discharge, 3.3 ft^3/s (0.093 m^3/s) Sept. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	23	16	16	10	23	24	31	7.4	7.7	5.5	3.7
2	7.4	17	15	15	11	16	24	23	7.7	7.7	5.2	3.7
3	7.1	15	14	14	9.8	432	60	20	7.4	7.1	5.0	3.8
4	6.8	13	13	13	10	1120	633	19	6.8	6.5	4.7	3.8
5	6.5	12	12	18	9.8	217	268	17	6.8	6.2	4.5	3.9
6	17	11	11	24	8.9	92	101	15	9.5	6.2	4.5	6.0
7	11	10	13	38	8.6	48	53	15	9.8	6.0	4.7	5.5
8	9.5	9.5	12	28	8.6	30	39	13	8.0	5.7	4.2	4.7
9	13	9.2	11	80	8.3	25	32	12	7.4	5.7	4.0	4.5
10	10	9.2	10	116	8.3	22	27	12	7.1	7.7	4.5	4.0
11	8.9	8.9	11	65	8.3	29	24	11	6.8	6.2	5.7	4.0
12	8.0	8.9	17	50	13	935	22	11	6.5	6.0	4.2	4.0
13	7.7	8.3	17	32	13	247	20	10	17	5.7	4.2	4.7
14	7.4	8.6	15	81	12	125	19	9.8	12	5.5	8.0	23
15	7.1	8.3	14	80	11	76	17	9.5	9.5	5.2	9.2	17
16	7.1	8.0	13	45	10	50	16	9.2	8.6	5.0	6.2	9.8
17	7.4	7.7	12	33	9.8	38	15	9.2	18	5.0	11	7.7
18	6.8	7.7	11	27	9.8	32	15	8.9	24	9.2	8.9	6.5
19	6.8	7.7	10	24	9.5	27	14	8.6	22	6.8	6.5	7.4
20	12	7.4	10	21	9.2	25	13	8.6	53	6.2	5.7	6.8
21	9.2	7.3	9.2	19	8.9	23	13	8.3	20	5.2	5.2	5.7
22	8.3	7.0	8.3	17	8.9	22	19	8.6	13	9.8	5.0	5.5
23	7.7	6.7	8.3	16	328	20	26	8.3	11	7.7	4.7	5.2
24	162	6.5	8.0	17	399	20	37	8.3	9.8	6.2	4.5	5.0
25	292	6.0	15	15	71	19	25	9.5	8.9	6.5	4.2	29
26	74	14	17	14	36	18	21	9.5	18	6.2	4.2	24
27	24	15	15	15	98	18	17	9.2	11	5.7	4.0	20
28	17	30	14	14	39	21	15	8.6	9.5	5.5	4.0	15
29	14	27	12	13	---	20	17	8.3	8.6	7.1	3.9	11
30	76	19	13	12	---	32	15	7.7	8.0	6.5	3.8	12
31	45	---	19	10	---	27	---	8.0	---	5.7	3.8	---
TOTAL	905.0	348.9	395.8	982	1187.7	3849	1641	367.1	373.1	199.4	163.7	266.9
MEAN	29.2	11.6	12.8	31.7	42.4	124	54.7	11.8	12.4	6.43	5.28	8.90
MAX	292	30	19	116	399	1120	633	31	53	9.8	11	29
MIN	6.5	6.0	8.0	10	8.3	16	13	7.7	6.5	5.0	3.8	3.7
CFSM	1.67	.66	.73	1.81	2.42	7.09	3.13	.67	.71	.37	.30	.51
IN.	1.92	.74	.84	2.09	2.52	8.18	3.49	.78	.79	.42	.35	.57

CAL YR 1976 TOTAL 9213.4 MEAN 25.2 MAX 292 MIN 5.5 CFSM 1.44 IN 19.59
WTR YR 1977 TOTAL 10679.6 MEAN 29.3 MAX 1120 MIN 3.7 CFSM 1.67 IN 22.70

03602500 PINEY RIVER AT VERNON, TN

LOCATION.--Lat 35°52'16", long 87°30'05", Hickman County, Hydrologic Unit 06040003 on right bank at county highway bridge, 40 ft (12 m) upstream from Pretty Creek, 0.2 mi (0.3 km) northwest of Vernon, 2.3 mi (3.7 km) downstream from Mill Creek, 6.5 mi (10.5 km) north of Centerville, and 8.3 mi (13.4 km) upstream from mouth.

DRAINAGE AREA.--202 mi^2 (523 km^2).

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 758: 1927(M). WSP 823: Drainage area. WSP 1306: Drainage area at site used Feb.9, 1931, to May 10, 1934. WSP 1436: 1926(M), 1927, 1929, 1930-31(M), 1932, 1934(M).

GAGE.--Water-stage recorder. Datum of gage is 461.72 ft (140.732 m) above mean sea level. Prior to May 11, 1934, nonrecording gage; July 3, 1925, to Feb. 8, 1931, at site 350 ft (107 m) upstream at datum 3.17 ft (0.966 m) higher; Feb. 9, 1931, to May 10, 1934, at site 0.4 mi (0.6 km) downstream at datum 0.40 ft (0.122 m) higher. May 11, 1934, to Sept. 30, 1970, water-stage recorder at site 350 ft (107 m) upstream; prior to June 29, 1965, at datum 3.17 ft (0.996 m) higher, and 2.17 ft (0.661 m) higher thereafter.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--52 years, 308 ft^3/s (8.723 m^3/s), 24.65 in/yr (626 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s (920 m^3/s) Dec. 21, 1926, gage height, 16.5 ft (5.03 m), site and datum then in use; minimum, 35 ft^3/s (0.991 m^3/s) Sept. 19, 20, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1897 reached a stage of 17.5 ft (5.33 m), original site and datum, discharge, 37,000 ft^3/s (1,050 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s (113 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 4	0730	*16700	473	16.48	5.023	Apr. 4	2045	5290	150	11.04	3.365
Mar. 12	1430	8040	228	12.95	3.947						

Minimum discharge, 66 ft^3/s (1.87 m^3/s) Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	250	120	103	120	619	133	314	132	136	93	72
2	106	200	120	103	120	455	144	274	132	127	90	73
3	104	180	118	108	118	888	214	303	129	120	87	73
4	100	170	117	107	118	10400	3450	436	123	115	85	78
5	102	160	116	109	118	2320	2520	404	122	112	83	74
6	148	150	116	114	115	1350	1310	358	118	111	81	76
7	136	140	122	120	112	961	1000	362	115	109	80	90
8	130	135	119	119	110	742	834	314	114	106	80	79
9	120	130	117	124	111	589	713	284	114	104	80	75
10	115	125	117	128	111	479	638	260	111	111	81	75
11	110	120	118	121	111	426	561	247	109	107	83	73
12	105	115	123	124	155	3690	479	228	107	109	78	72
13	100	110	121	123	170	1920	376	214	111	101	76	81
14	100	110	120	159	158	1140	344	203	166	98	83	138
15	95	110	122	236	152	828	318	195	144	95	91	130
16	95	110	122	235	144	634	295	188	122	93	87	101
17	95	110	120	210	140	500	270	181	120	93	106	93
18	95	111	119	203	139	455	256	174	120	90	106	87
19	100	111	117	185	137	360	243	168	115	90	87	127
20	110	110	116	177	133	301	234	164	129	90	84	127
21	135	108	113	164	129	260	225	170	114	91	81	101
22	120	107	111	154	128	231	253	168	112	95	80	94
23	110	106	112	146	191	205	243	160	134	95	93	91
24	120	106	109	146	2160	190	274	156	125	90	85	97
25	150	106	112	141	1040	178	277	156	162	94	83	1050
26	550	118	113	137	739	167	260	152	260	95	80	594
27	350	130	109	140	1230	161	243	148	214	90	79	291
28	250	126	109	139	853	163	231	144	164	93	76	240
29	220	126	107	130	---	156	267	142	144	103	74	193
30	200	121	108	127	---	148	253	144	138	106	75	170
31	300	---	110	124	---	138	---	136	---	97	74	---
TOTAL	4682	3911	3593	4456	9062	31054	16858	6947	4020	3166	2601	4715
MEAN	151	130	116	144	324	1002	562	224	134	102	83.9	157
MAX	550	250	123	236	2160	10400	3450	436	260	136	106	1050
MIN	95	106	107	103	110	138	133	136	107	90	74	72
CFSM	.75	.64	.57	.71	1.60	4.96	2.78	1.11	.66	.51	.42	.78
IN.	.86	.72	.66	.82	1.67	5.72	3.10	1.28	.74	.58	.48	.87

CAL YR 1976 TOTAL 115457 MEAN 315 MAX 3700 MIN 95 CFSM 1.56 IN 21.26
WTR YR 1977 TOTAL 95065 MEAN 260 MAX 10400 MIN 72 CFSM 1.29 IN 17.51

NOTE.--No gage-height record Oct. 5 to Nov. 17.

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN

LOCATION.--Lat 35°55'48", long 87°44'35", Humphreys County, Hydrologic Unit 06040003, on left bank 0.4 mi (0.6 km) downstream from Tumbling Creek, 1.3 mi (2.1 km) upstream from bridge on State Highway 13, 3.6 mi (5.8 km) southeast of Hurricane Mills, and at mile 26.0 (41.8 km).

DRAINAGE AREA.--2,557 mi^2 (6,623 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1951, published as "near Hurricane Mills."

REVISED RECORDS.--WSP 803: 1935. WSP 823: 1927(M). WSP 853: Drainage area. WSP 1436: 1926-28, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 370.53 ft (112.938 m) above mean sea level. Prior to Feb. 21, 1934, nonrecording gage and Feb. 21, 1934, to Sept. 30, 1951, water-stage recorder at bridge 5.6 mi (9.0 km) downstream at datum 8.80 ft (2.682 m) lower.

REMARKS.--Records good. Flow regulated since January 1976 by Normandy Lake (station 03596460). Prior to 1953 occasional regulation at low flow from small dams upstream. Minor diversions for irrigation.

AVERAGE DISCHARGE.--52 years, 4,055 ft^3/s (115.0 m^3/s), 21.54 in/yr (547 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft^3/s (3,460 m^3/s) Feb. 14, 1948, gage height, 30.70 ft (9.357 m), from floodmark in gage house, present site and datum; minimum, 185 ft^3/s (5.24 m^3/s) Sept. 11, 12, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 49,900 ft^3/s (1,410m^3/s) Mar. 6, gage height, 21.59 ft (6.581 m); minimum, 576 ft^3/s (16.3 m^3/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	952	6930	2980	2060	2170	10700	2180	3500	1110	1530	770	611
2	946	6830	3290	2200	1970	8640	2150	3990	1080	1260	758	592
3	920	5030	2900	2520	1820	7430	2250	4220	1100	1100	729	578
4	905	3790	2680	2460	1730	25900	7280	4690	1070	1020	700	584
5	915	3150	2560	2250	1600	38700	23800	4340	1010	1080	680	597
6	973	2750	2430	2170	1500	40400	29500	4320	947	1030	662	662
7	1040	2450	2320	2480	1420	36800	29700	3710	923	943	644	752
8	1120	2240	2290	4010	1370	26100	29800	3290	927	869	635	823
9	1120	2070	2260	5390	1320	11700	19000	3010	918	829	644	753
10	1110	1910	2410	5490	1280	9230	11000	2940	890	895	641	697
11	1210	1810	2520	6180	1260	7720	8540	2900	865	921	641	659
12	1260	1730	2400	7910	1320	11200	7060	2600	844	884	757	670
13	1250	1680	2440	6640	1470	25200	6210	2310	832	888	689	709
14	1210	1720	2850	5120	1660	31900	5580	2080	1090	871	703	900
15	1120	1740	3780	5610	1750	32100	4740	1900	1340	801	870	1330
16	1030	1720	3670	7190	1820	25600	3900	1750	1210	755	1070	1620
17	962	1660	3190	7360	1810	11500	3220	1640	1050	725	1040	1890
18	911	1610	2830	6020	1700	9240	2800	1540	1030	711	1040	1820
19	891	1680	2570	4830	1600	8030	2560	1500	1140	739	1060	1920
20	918	1850	2360	4060	1510	6820	2390	1440	1260	714	941	1760
21	973	1850	2190	3520	1470	5520	2260	1330	1450	747	868	1640
22	989	1840	2060	3010	1420	4510	2190	1290	1480	758	820	1650
23	971	1810	1930	2630	1400	4020	2210	1250	1370	875	806	1410
24	1050	1750	1870	2380	5850	3620	5690	1230	1330	826	763	1230
25	2530	1710	1800	2280	20000	3340	11500	1210	1310	877	693	3560
26	6370	1700	1750	2310	19500	3110	9590	1190	1790	937	663	11300
27	11600	1830	1690	2380	14400	2940	6860	1240	2400	862	644	9190
28	13300	1990	1970	2760	11800	2740	5190	1280	2550	786	625	7200
29	7710	2100	2310	2630	---	2570	4260	1230	2610	779	625	5010
30	4590	2400	2170	2460	---	2400	3720	1180	2020	823	646	3660
31	5020	---	2030	2350	---	2220	---	1150	---	793	634	---
TOTAL	75866	73330	76500	120660	107920	421900	257130	71250	38946	27628	23461	65777
MEAN	2447	2444	2468	3892	3854	13610	8571	2298	1298	891	757	2193
MAX	13300	6930	3780	7910	20000	40400	29800	4690	2610	1530	1070	11300
MIN	891	1610	1690	2060	1260	2220	2150	1150	832	711	625	578

CAL YR 1976 TOTAL 1339129 MEAN 3659 MAX 21800 MIN 756 MEAN‡ 3758 CFSM‡ 1.47 IN.‡ 20.00
WTR YR 1977 TOTAL 1360368 MEAN 3727 MAX 40400 MIN 578 MEAN‡ 3713 CFSM‡ 1.45 IN.‡ 19.71

‡ Adjusted for change in contents in Normandy Lake.

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN--CONTINUED

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-67, 1973 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CHEMICAL OXYGEN DEMAND (LOW LEVEL) (MG/L)	BIOCHEMICAL OXYGEN DEMAND 5 DAY (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT											
19...	1150	926	220	7.6	13.9	3	2	8.3	2	--	--
NOV											
10...	1333	10	--	--	--	--	--	--	--	1.6	--
18...	1330	1530	270	--	8.0	--	--	--	--	--	--
23...	1220	1830	220	7.7	6.1	3	1	12.2	8	--	--
DEC											
15...	1215	3880	260	7.3	6.1	3	16	12.3	1	--	--
FEB											
15...	0945	1740	200	7.9	5.0	6	4	13.8	8	2.9	<10
MAR											
21...	0915	5660	210	7.2	13.0	7	12	10.5	--	1.0	960
APR											
12...	1000	7010	200	7.1	16.0	9	16	9.0	--	<1.0	1100
12...	1850	6340	220	--	18.0	--	--	--	--	--	--
MAY											
25...	1415	1210	240	8.3	24.0	8	7	10.5	2	4.6	3800
JUN											
22...	1015	1500	210	8.0	26.0	15	13	8.9	--	4.0	7600
JUL											
27...	1005	894	220	--	26.0	--	--	--	--	--	--
AUG											
16...	1315	1070	190	7.7	27.0	5	86	6.3	6	1.1	>20000

DATE	FECAL COLIFORM (COL. PER 100 ML)	TOTAL CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	TOTAL SODIUM (NA) (MG/L)	TOTAL POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT									
19...	--	41	4.7	2.8	.8	112	92	4.0	6.0
NOV									
10...	10	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
23...	--	38	3.5	3.0	.9	122	100	6.0	4.0
DEC									
15...	--	47	5.2	4.0	.8	146	120	10	4.0
FEB									
15...	<10	46	4.6	3.7	1.2	134	110	13	3.0
MAR									
21...	100	--	--	--	--	113	93	--	--
APR									
12...	150	--	--	--	--	104	85	--	--
12...	--	--	--	--	--	--	--	--	--
MAY									
25...	<100	48	4.2	2.5	1.2	122	100	.1	6.0
JUN									
22...	<100	--	--	--	--	101	83	--	--
JUL									
27...	--	--	--	--	--	--	--	--	--
AUG									
16...	100	34	3.7	4.0	1.7	101	83	11	4.0

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)
OCT											
19...	.1	5.6	110	.15	275	6	.29	.01	.15	.18	.13
NOV											
10...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	.1	4.1	130	.18	642	2	.35	.02	.11	.13	.13
DEC											
15...	.1	3.0	160	.22	1680	23	.46	.08	.05	.23	.12
FEB											
15...	.1	1.2	170	.23	799	4	.25	.05	.09	.30	--
MAR											
21...	--	--	--	--	--	--	.68	.01	.09	.23	--
APR											
12...	--	--	--	--	--	--	71	.02	.08	.23	--
12...	--	--	--	--	--	--	--	--	--	--	--
MAY											
25...	.1	--	170	.23	555	10	.23	.01	.25	.13	--
JUN											
22...	--	--	--	--	--	--	.01	.06	.21	.25	--
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
16...	.1	--	120	.16	347	21	.33	.02	.06	.25	--

DATE	TOTAL ALUM-INUM (AL) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL BERYL-LIUM (BE) (UG/L)	TOTAL BORON (B) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)
OCT											
19...	--	--	--	--	--	--	--	--	290	<50	--
NOV											
10...	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
23...	300	<2	<100	<10	60	<1	<5	10	220	<50	<10
DEC											
15...	--	--	--	--	--	--	--	--	720	90	--
FEB											
15...	300	<2	<100	<10	80	<1	<5	<10	170	<50	<10
MAR											
21...	--	--	--	--	--	--	--	--	650	<50	--
APR											
12...	--	--	--	--	--	--	--	--	800	<50	--
12...	--	--	--	--	--	--	--	--	--	--	--
MAY											
25...	300	<2	<100	<10	180	<1	<5	<10	70	<50	<10
JUN											
22...	--	--	--	--	--	--	--	--	620	--	--
JUL											
27...	--	--	--	--	--	--	--	--	--	--	--
AUG											
16...	500	<2	<100	<10	60	<1	<5	110	620	<50	<10

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL LITHIUM (LI) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL NICKEL (NI) (UG/L)	TOTAL SELENIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL TITANIUM (TI) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT										
19...	--	30	<10	--	--	--	--	--	--	--
NOV										
10...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
23...	<10	20	<10	.3	<50	1	<10	<1000	<10	1.4
DEC										
15...	--	40	20	--	--	--	--	--	--	--
FEB										
15...	<10	40	<10	<.2	<50	<1	<10	<1000	20	3.8
MAR										
21...	--	70	70	--	--	--	--	--	--	--
APR										
12...	--	100	20	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	<10	30	10	<.2	<50	<1	<10	<1000	110	2.4
JUN										
22...	--	60	--	--	--	--	--	--	--	--
JUL										
27...	--	--	--	--	--	--	--	--	--	--
AUG										
16...	<10	60	10	<.2	<50	<1	<10	<1000	10	1.2

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN
(Hydrologic bench-mark station)

LOCATION.--Lat 35°29'45", long 87°49'58", Perry County, Hydrologic Unit 06040004, on right bank 0.4 mi (0.7 km) downstream from Little Opossum Creek, 0.5 mi (0.8 km) downstream from bridge on State Highway 13, 1.3 mi (2.1 km) north of Flat Woods, 3.9 mi (6.3 km) upstream from Sinking Creek, and at mile 58.7 (94.4 km).

DRAINAGE AREA.--447 mi^2 (1,158 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 803: 1935. WSP 823: Drainage area. WSP 1436: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M), WRD Tenn. 1971: 1970.

GAGE.--Water-stage recorder. Datum of gage is 513.58 ft (156.539 m) above mean sea level. Prior to May 27, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--57 years, 741 ft^3/s (20.98 m^3/s), 22.51 in/yr (572 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft^3/s (2,550 m^3/s) Feb. 13, 1948, gage height, 32.0 ft (9.75 m), from high-water mark in gage house, from rating curve extended above 50,000 ft^3/s (1,420 m^3/s) on basis of slope-area and contracted-opening measurements of peak flow and rainfall-runoff study; minimum, 65 ft^3/s (1.84 m^3/s) Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft^3/s (127 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 24	2400	5210	148	11.48	3.499	Mar. 13	0900	11000	312	16.75	5.105
Mar. 4	2300	*22500	637	22.46	6.846	Apr. 5	1000	8630	244	14.89	4.538

Minimum discharge, 143 ft^3/s (4.05 m^3/s) Sept. 2, 3, 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	278	738	463	411	397	1410	483	508	300	320	242	148
2	322	589	403	377	385	1140	478	541	288	312	219	145
3	284	510	383	392	381	1190	549	601	281	292	204	143
4	274	461	366	408	379	13300	2730	606	270	276	193	143
5	289	425	352	413	367	15200	7580	546	261	263	187	147
6	351	399	342	453	353	3260	3510	498	257	254	181	200
7	419	380	352	537	339	2070	2010	459	255	244	176	253
8	376	363	362	606	328	1520	1450	435	303	237	172	250
9	337	349	344	629	322	1160	1160	414	277	230	168	223
10	326	342	327	868	310	984	989	390	255	230	162	192
11	311	336	320	1060	302	909	864	374	245	232	175	179
12	300	336	343	886	325	3730	764	364	240	233	303	171
13	293	331	382	763	380	9810	689	353	238	230	230	175
14	261	323	375	803	374	3310	643	344	292	221	215	330
15	260	323	364	1200	352	2050	605	336	523	211	258	663
16	258	317	356	1160	338	1540	578	328	341	201	290	731
17	259	310	347	961	329	1230	546	320	315	196	251	457
18	260	306	337	823	321	1080	515	318	374	202	254	326
19	260	303	334	728	318	912	503	314	525	203	262	286
20	303	302	332	658	313	817	487	304	688	195	229	385
21	346	300	320	601	306	731	462	297	1010	197	213	352
22	310	294	317	550	302	656	492	293	839	205	199	283
23	288	287	307	505	317	607	559	291	518	211	189	247
24	377	277	303	488	2780	572	751	289	420	217	183	236
25	984	274	313	507	3940	548	763	290	355	247	177	454
26	1620	293	413	484	1960	523	656	320	537	262	172	2420
27	1030	384	421	474	1860	504	604	332	836	234	166	1360
28	670	459	396	476	1880	512	563	315	547	223	161	1000
29	532	530	380	455	---	577	561	305	407	227	156	759
30	511	531	369	422	---	539	543	301	349	264	153	773
31	776	---	398	411	---	506	---	301	---	258	150	---
TOTAL	13465	11372	11121	19509	20258	72897	33087	11687	12346	7327	6290	13431
MEAN	434	379	359	629	724	2352	1103	377	412	236	203	448
MAX	1620	738	463	1200	3940	15200	7580	606	1010	320	303	2420
MIN	258	274	303	377	302	504	462	289	238	195	150	143
CFSM	.97	.85	.80	1.41	1.62	5.26	2.47	.84	.92	.53	.45	1.00
IN.	1.12	.95	.93	1.62	1.69	6.07	2.75	.97	1.03	.61	.52	1.12

CAL YR 1976 TOTAL 240400 MEAN 657 MAX 4780 MIN 215 CFSM 1.47 IN 20.01
WTR YR 1977 TOTAL 232790 MEAN 638 MAX 15200 MIN 143 CFSM 1.43 IN 19.37

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1964 to current year.

INSTRUMENTATION.--Temperature recorder since June 1964.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 31.0°C July 13-15, 1966; minimum, 0.0°C Jan. 9-11, 1970, Jan. 1-3, 12, 17-22, 30, 31, Feb. 1, 2, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 30.5°C July 15; minimum, 0.0°C Jan. 1-3, 12, 17-22, 30, 31, Feb. 1, 2, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
14...	1625	266	120	--	14.5	--	--	--	--	--	--	--
NOV												
11...	1015	320	75	7.1	8.0	--	37	29	78	42	2	14
JAN												
27...	1030	470	75	7.2	4.0	13.0	91	811	69	39	6	13
27...	1320	491	75	--	4.0	--	--	--	--	--	--	--
MAR												
16...	1115	1540	65	6.6	13.0	9.7	163	109	143	30	8	9.9
APR												
13...	1345	685	85	--	18.5	--	--	--	--	--	--	--
MAY												
24...	1100	290	105	7.2	22.0	--	144	33	8444	43	6	14
JUL												
19...	1030	204	105	7.0	27.0	--	224	44	72	49	4	16
SEP												
09...	1230	203	100	--	24.0	--	--	--	--	--	--	--
12...	0945	172	110	7.0	21.0	7.6	8440	32	95	49	8	16

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
11...	1.7	1.3	6	.1	.7	49	0	40	6.2	3.2	1.7	.1
JAN												
27...	1.7	1.0	5	.1	.6	41	0	34	4.1	3.5	2.1	.0
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
16...	1.2	1.3	8	.1	.9	27	0	22	11	5.5	2.2	.0
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
24...	1.9	1.2	6	.1	.8	45	0	37	4.5	3.0	2.1	.0
JUL												
19...	2.1	1.4	6	.1	1.0	54	0	44	8.6	2.2	1.8	.0
SEP												
09...	--	--	--	--	--	--	--	--	--	--	--	--
12...	2.1	1.2	5	.1	.9	50	0	41	8.0	2.6	1.8	.0

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	TOTAL FILT-RABLE RESIDUE (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
11...	5.5	54	47	52	.07	46.7	2	.06	.01	0	100	0
JAN												
27...	3.9	53	--	46	.07	67.3	--	.23	.03	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
16...	6.4	54	--	41	.07	225	--	.42	.07	1	0	1
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
24...	5.6	54	--	51	.07	42.3	--	.19	.02	--	--	--
JUL												
19...	5.7	84	--	57	.11	46.3	--	.08	.02	--	--	--
SEP												
09...	--	--	--	--	--	--	--	--	--	--	--	--
12...	7.2	61	--	56	.08	28.3	--	.09	.02	--	--	--

DATE	TOTAL CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
11...	30	0	110	7	20	.0	0	0	0	3.2	<.4	5.1
JAN												
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
16...	10	2	570	8	30	.0	0	0	20	--	--	--
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
09...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)	CYANIDE (CN) (MG/L)	TOTAL PCB (UG/L)	PCB IN BOTTOM MA-TERIAL (UG/KG)	POLY-CHLO-RINATED NAPH-THA-LENES (UG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL CHLOR-DANE (UG/L)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
11...	<.4	4.6	<.4	.06	.03	.00	.0	0	.00	.00	.0	.0
JAN												
27...	--	--	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
16...	--	--	--	--	--	.00	--	--	--	--	--	--
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
24...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
19...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
09...	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	CHLORDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)
NOV											
11...	0	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00
JAN											
27...	--	--	--	--	--	--	--	--	--	--	--
MAR											
16...	--	--	--	--	--	--	--	--	--	--	--
MAY											
24...	--	--	--	--	--	--	--	--	--	--	--
JUL											
19...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	TOTAL METHYL PARATHION (UG/L)
NOV										
11...	.0	.00	.00	.0	.00	.0	.00	.0	.00	.00
JAN										
27...	--	--	--	--	--	--	--	--	--	--
MAR										
16...	--	--	--	--	--	--	--	--	--	--
MAY										
24...	--	--	--	--	--	--	--	--	--	--
JUL										
19...	--	--	--	--	--	--	--	--	--	--

DATE	TOTAL METHYL TRITHION (UG/L)	TOTAL PARATHION (UG/L)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV										
11...	.00	.00	0	0	.00	.00	.00	.00	12	10
JAN										
27...	--	--	--	--	--	--	--	--	3	3.8
MAR										
16...	--	--	--	--	--	--	--	--	28	116
MAY										
24...	--	--	--	--	--	--	--	--	3	2.3
JUL										
19...	--	--	--	--	--	--	--	--	16	8.8

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.5	19.0	10.5	9.5	10.0	4.0	3.0	3.5	1.0	0.0	0.5
2	19.5	18.5	19.0	10.5	9.5	10.0	4.5	4.0	4.0	0.0	0.0	0.0
3	19.5	18.0	19.0	11.0	10.0	10.5	4.5	4.0	4.5	1.0	0.0	0.5
4	19.5	17.0	18.5	10.5	9.5	10.0	5.0	4.0	4.5	2.0	1.0	1.5
5	20.0	18.5	19.0	9.5	8.5	9.0	5.5	4.5	5.0	3.5	2.0	3.0
6	19.5	18.0	18.5	8.5	8.0	8.5	6.0	5.0	5.5	3.5	3.0	3.5
7	18.0	16.5	17.0	9.0	8.5	8.5	6.0	5.0	5.5	3.5	3.0	3.0
8	16.5	15.5	16.0	8.5	7.0	8.0	5.0	4.0	4.5	3.0	2.0	3.0
9	16.0	15.0	13.5	8.5	6.5	8.0	4.5	3.5	4.0	3.5	3.0	3.0
10	15.5	14.5	13.5	9.5	8.5	9.0	5.0	4.0	4.5	3.5	1.0	2.0
11	15.5	14.5	12.0	9.0	7.0	8.5	6.5	5.0	6.0	1.0	0.5	0.5
12	16.0	14.5	10.5	7.0	6.0	6.5	8.0	6.5	7.0	1.0	0.0	0.5
13	16.5	15.0	10.0	6.0	5.5	6.0	7.0	6.0	6.5	1.5	0.5	1.0
14	16.5	15.0	10.0	5.5	5.5	5.5	6.5	5.5	6.0	3.5	1.5	3.0
15	16.5	15.0	10.5	6.5	5.5	6.0	7.0	6.0	6.5	4.5	3.5	4.0
16	16.0	14.5	15.5	6.5	5.5	6.0	6.5	5.5	6.0	4.5	1.5	3.5
17	14.5	13.5	14.0	7.0	6.0	6.5	6.0	5.0	5.5	1.5	0.0	0.5
18	13.5	12.0	13.0	8.0	6.0	7.0	6.5	5.5	6.0	0.5	0.0	0.0
19	13.5	12.0	13.0	8.5	7.0	8.0	8.0	6.0	6.5	0.0	0.0	0.0
20	13.5	12.0	13.0	9.0	8.5	8.5	8.0	5.0	6.5	0.5	0.0	0.0
21	12.0	11.0	11.5	8.5	7.0	8.0	5.0	3.0	4.0	0.5	0.0	0.0
22	11.5	10.5	11.0	7.0	5.5	6.5	3.0	1.5	2.0	0.5	0.0	0.5
23	12.0	11.0	11.5	5.5	5.0	5.5	2.0	1.5	2.0	1.5	0.5	1.0
24	13.0	12.0	12.0	6.0	5.0	5.5	2.0	1.0	1.5	2.0	1.5	2.0
25	13.5	13.0	13.5	7.0	6.0	6.5	3.0	2.0	3.0	3.0	2.0	2.0
26	13.5	13.0	13.5	9.0	7.0	8.0	4.0	3.0	3.5	3.5	1.5	3.0
27	13.0	11.5	12.0	10.5	9.0	10.0	4.5	3.5	4.0	4.5	3.5	4.0
28	11.5	10.0	10.5	10.0	7.0	8.5	5.5	4.5	5.0	4.5	3.0	4.0
29	10.0	9.5	10.0	7.0	4.5	5.5	4.5	3.5	4.5	3.0	0.5	1.5
30	10.5	10.0	10.0	4.5	3.5	4.0	4.5	3.5	4.0	1.0	0.0	0.5
31	10.5	10.5	10.5	---	---	---	3.5	1.0	2.0	1.0	0.0	0.5
MONTH	20.0	9.5	13.5	11.0	3.5	7.5	8.0	1.0	4.5	4.5	0.0	1.5

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	0.0	0.5	9.0	8.5	8.5	17.0	14.0	15.5	19.5	18.0	19.0
2	2.0	0.0	1.0	9.5	8.0	9.0	16.0	15.0	15.5	19.0	18.5	19.0
3	3.5	2.0	3.0	9.5	9.0	9.0	16.0	14.5	15.0	19.5	18.0	18.5
4	5.0	3.5	4.5	10.0	9.0	9.5	14.5	13.5	14.0	18.5	18.0	18.5
5	5.5	4.0	5.0	10.0	10.0	10.0	13.5	11.5	12.0	20.5	18.0	19.5
6	4.5	3.0	4.0	10.0	9.5	10.0	11.5	10.5	11.0	21.0	19.5	20.5
7	3.5	2.0	3.0	10.0	9.0	9.5	13.5	11.0	12.0	22.0	20.0	21.0
8	3.5	2.0	3.0	10.5	9.0	9.5	15.0	13.0	14.0	23.0	21.0	22.0
9	4.0	2.0	3.5	10.5	9.5	10.0	15.0	13.5	14.5	22.0	19.0	20.5
10	5.0	3.0	4.0	12.0	10.0	11.0	16.0	14.0	15.0	22.0	18.0	19.0
11	6.0	4.5	5.5	13.5	12.0	13.0	17.0	15.0	16.0	23.5	17.0	18.5
12	8.0	6.0	7.0	14.0	13.5	13.5	18.0	16.0	16.5	24.0	16.5	18.5
13	8.0	6.5	7.0	14.0	13.0	13.5	18.5	16.5	17.0	24.5	17.0	18.5
14	8.0	6.5	7.0	13.0	12.0	13.0	18.5	16.0	17.0	25.5	18.0	19.0
15	7.0	5.5	6.5	14.0	12.0	13.5	19.0	16.0	17.0	26.0	18.0	19.0
16	6.0	4.5	5.5	14.5	13.0	14.0	19.0	16.5	18.0	21.0	18.5	20.0
17	5.5	4.5	5.0	13.5	13.0	13.0	19.0	17.0	18.5	21.0	19.5	20.5
18	7.0	5.0	6.0	14.5	13.0	14.0	19.0	17.0	18.0	22.0	20.0	21.0
19	6.5	5.5	6.0	14.0	13.0	13.5	19.0	18.0	18.5	23.0	20.0	21.5
20	6.0	4.5	5.5	14.0	13.0	13.5	19.5	18.5	19.0	23.5	21.0	22.0
21	6.0	4.5	5.5	14.0	12.0	13.5	19.0	18.5	18.5	23.5	21.0	22.0
22	8.5	5.5	6.5	13.5	11.0	13.0	18.5	18.0	18.5	23.0	21.0	21.5
23	10.0	8.5	9.5	13.5	11.0	12.0	18.5	17.0	18.0	23.0	21.0	22.0
24	9.5	9.0	9.5	13.5	11.0	13.0	18.0	16.5	17.0	23.0	21.0	22.0
25	10.0	9.5	9.5	14.5	11.5	13.5	17.0	15.5	16.0	22.0	21.0	22.0
26	12.0	10.0	11.0	14.5	13.0	14.0	16.0	14.5	15.5	22.0	21.0	21.5
27	12.0	10.0	11.0	16.0	14.5	15.5	16.0	14.0	15.5	23.5	21.0	22.0
28	10.0	9.0	9.5	17.0	15.5	16.5	17.0	15.0	16.5	24.0	21.5	22.0
29	---	---	---	18.0	16.0	17.0	18.0	16.5	17.0	24.5	22.0	23.0
30	---	---	---	19.5	17.0	19.0	19.0	16.5	17.0	25.5	23.0	23.5
31	---	---	---	19.0	16.5	18.0	---	---	---	26.0	23.5	24.5
MONTH	12.0	0.0	6.0	19.5	8.0	13.0	19.5	10.5	16.0	26.0	16.5	20.5
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	23.5	24.5	28.0	25.5	26.5	26.0	24.5	25.5	28.0	25.5	26.5
2	25.0	23.0	23.5	28.0	25.5	26.5	26.5	24.0	25.5	28.0	25.5	26.5
3	25.0	22.0	23.5	27.0	24.5	25.5	27.0	24.0	25.5	28.0	26.0	27.0
4	25.0	22.0	23.5	27.0	25.0	26.0	28.0	25.0	26.0	28.0	25.5	26.5
5	25.0	22.0	23.5	28.5	25.5	26.5	28.5	25.0	26.5	27.0	25.5	26.0
6	26.0	23.0	24.5	29.0	26.0	27.0	29.0	26.0	28.0	26.0	25.0	25.5
7	24.5	22.0	23.5	29.5	26.5	28.0	28.5	26.5	28.0	25.5	24.5	25.0
8	23.0	20.5	21.5	29.5	27.0	28.5	29.5	26.5	28.5	26.5	24.5	25.5
9	23.5	20.5	22.0	29.0	26.5	28.0	30.0	27.0	28.5	26.0	24.5	25.0
10	24.0	21.0	22.0	29.0	26.5	28.0	29.0	27.0	28.5	26.0	24.5	25.0
11	25.0	21.5	23.5	28.0	26.0	26.5	29.0	26.5	28.0	25.0	23.0	24.0
12	26.0	23.0	24.5	28.0	25.5	27.0	28.5	26.5	27.0	24.5	22.0	23.5
13	26.5	24.0	25.0	29.5	26.0	28.0	28.5	26.0	27.0	24.5	23.5	24.0
14	24.5	23.5	24.0	30.0	26.5	28.5	27.0	25.5	26.0	23.5	23.0	23.0
15	23.5	23.0	23.5	30.5	28.0	29.0	25.5	25.0	25.0	23.5	22.0	23.0
16	23.5	22.0	23.0	30.0	28.0	29.0	27.0	24.5	25.5	23.0	22.0	22.0
17	23.5	22.0	23.0	29.5	27.0	28.5	25.5	25.0	25.5	24.0	22.0	23.0
18	24.5	22.0	23.5	29.0	27.0	28.0	26.0	24.5	25.5	24.0	22.0	23.5
19	24.5	23.0	24.0	28.5	26.5	28.0	24.5	23.5	24.0	23.5	23.0	23.5
20	24.5	23.0	23.5	28.5	26.0	27.0	25.5	23.5	24.5	23.5	22.0	23.0
21	24.5	23.0	24.0	28.5	26.0	27.0	26.0	23.5	25.0	23.0	21.5	22.0
22	25.0	23.0	24.5	28.5	26.0	27.0	26.5	24.0	25.0	23.5	21.0	22.0
23	26.0	24.0	25.0	28.5	25.5	27.0	26.5	24.5	25.5	23.5	21.5	22.0
24	26.5	24.5	25.5	28.5	26.0	27.0	27.0	25.0	26.0	22.0	21.0	21.5
25	26.5	24.5	25.5	27.0	26.0	26.5	28.0	25.0	26.5	21.0	20.0	20.5
26	25.5	24.0	24.5	27.0	25.0	26.0	28.0	26.0	27.0	21.0	20.0	20.5
27	25.0	23.5	24.5	27.0	25.0	26.0	28.5	26.5	27.0	21.5	21.0	21.0
28	26.0	24.0	25.0	25.5	24.5	25.0	28.0	26.0	27.0	21.0	20.5	21.0
29	26.0	24.5	25.5	25.5	24.5	25.0	28.0	26.0	26.5	20.5	19.5	20.0
30	27.0	25.0	26.0	27.0	24.5	26.0	28.0	25.5	26.5	20.0	19.5	20.0
31	---	---	---	28.0	25.0	26.5	28.0	25.5	27.0	---	---	---
MONTH	27.0	20.5	24.0	30.5	24.5	27.0	30.0	23.5	26.5	28.0	19.5	23.5
YEAR	30.5	0.0	15.5									

03604500 BUFFALO RIVER NEAR LOBELVILLE, TN

LOCATION.--Lat 35°48'46", long 87°47'51", Perry County, Hydrologic Unit 06040004, on right bank 30 ft (9 m) upstream from Standing Rock Bridge, 1.4 mi (2.3 km) downstream from bridge on State Highway 13, 3 mi (5 km) north of Lobelville, 13 mi (21 km) downstream from Cane Creek, and at mile 17.7 (28.5 km).

DRAINAGE AREA.--707 mi^2 (1,831 km^2).

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October 1927, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935. WSP 823: Drainage area. WSP 853: 1928-37. WSP 1436: 1932(m).

GAGE.--Water-stage recorder. Datum of gage 403.02 ft (122.840 m) above mean sea level. Nov. 1, 1927, to May 31, 1934, nonrecording gage 40 ft (12 m) downstream at same datum.

REMARKS.--Records good. Periodic observation of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--50 years, 1,165 ft^3/s (32.99 m^3/s), 22.38 in/yr (568 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft^3/s (2,830 m^3/s) Feb. 14, 1948, gage height, 23.76 ft (7.242 m) from high-water mark in gage house, from rating curve extended above 40,000 ft^3/s (1,130 m^3/s) on basis of slope-area measurement of peak flow; minimum, 135 ft^3/s (3.82 m^3/s) Aug. 18, 1953, caused by regulations upstream at unknown location; minimum discharge unaffected by regulation, 142 ft^3/s (4.02 m^3/s) Oct. 1-8, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 14, 1948. Flood of March 1902 reached a stage of about 21.8 ft (6.64 m), discharge not determined, from flood profile by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,200 ft^3/s (147 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Feb. 26	0500	5530	157	10.15	3.094
Mar. 6	0200	*18700	530	15.63	4.764
Mar. 14	1400	11000	312	13.46	4.103
Apr. 6	1500	9560	271	12.81	3.904
Sept. 26	0400	5640	160	10.25	3.124

Minimum discharge, 230 ft^3/s (6.51 m^3/s) Sept. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	439	1100	826	606	654	2810	835	821	439	628	332	232
2	425	1120	764	611	632	2280	831	769	439	566	323	231
3	443	967	681	594	619	2090	887	817	432	518	300	231
4	432	854	641	606	615	8820	3260	1910	418	477	284	231
5	411	774	606	636	611	14100	7180	2220	405	447	271	231
6	501	709	586	700	590	15600	9090	1500	395	422	264	259
7	561	658	590	801	566	5890	5230	1210	385	405	257	259
8	582	623	594	877	544	3110	2960	1030	375	388	254	284
9	570	594	586	961	531	2410	2290	906	398	375	252	297
10	535	574	570	1060	522	1980	1900	812	398	372	245	279
11	493	557	552	1250	509	1710	1620	739	378	366	250	264
12	469	544	570	1380	561	3800	1420	681	369	372	245	252
13	454	535	598	1270	632	6320	1260	641	458	366	279	266
14	443	531	619	1270	649	10300	1160	611	505	353	320	411
15	425	522	623	1680	632	5390	1090	582	450	344	366	817
16	405	514	602	1900	598	3010	1010	561	632	332	353	801
17	398	501	586	1660	574	2380	946	539	561	323	418	887
18	395	493	570	1400	561	2010	896	526	518	323	481	686
19	395	485	552	1100	548	1760	849	509	544	306	385	574
20	439	481	544	1200	535	1510	812	497	729	289	347	590
21	493	473	535	1110	522	1340	769	485	863	279	326	548
22	501	466	522	1000	514	1230	785	473	1170	344	300	473
23	485	458	505	916	561	1120	821	462	1120	347	284	415
24	561	454	493	868	1970	1030	921	454	849	317	274	398
25	1570	443	497	854	3750	967	1080	450	801	320	264	2220
26	1750	469	535	844	4770	921	1080	462	1090	338	259	3840
27	1970	611	602	821	3650	882	977	473	1090	366	254	3080
28	1530	663	632	795	3230	868	906	489	1180	332	248	2190
29	1170	785	606	764	---	882	872	473	946	323	245	1640
30	1010	821	590	724	---	906	849	454	749	323	239	1340
31	977	---	602	681	---	887	---	447	---	332	236	---
TOTAL	21232	18779	18379	30939	30650	108313	54586	23003	19086	11593	9155	24226
MEAN	685	626	593	998	1095	3494	1820	742	636	374	295	808
MAX	1970	1120	826	1900	4770	15600	9090	2220	1180	628	481	3840
MIN	395	443	493	594	509	868	769	447	369	279	236	231
CFSM	.97	.89	.84	1.41	1.55	4.94	2.57	1.05	.90	.53	.42	1.14
IN.	1.12	.99	.97	1.63	1.61	5.70	2.87	1.21	1.00	.61	.48	1.27

CAL YR 1976 TOTAL 394854 MEAN 1079 MAX 7210 MIN 342 CFSM 1.53 IN 20.78
WTR YR 1977 TOTAL 369941 MEAN 1014 MAX 15600 MIN 231 CFSM 1.43 IN 19.47

03605555 TRACE CREEK ABOVE DENVER, TN

LOCATION.--Lat 36°03'08", long 87°54'27", Humphreys County, Hydrologic Unit 06040005, on left bank at bridge on U. S. Highway 70, 1.0 mi (1.6 km) east of Denver, 3.9 mi (6.3 km) northeast of New Johnsonville, and at mile 4.2 (6.8 km).

DRAINAGE AREA.--31.9 mi^2 (82.6 km^2).

PERIOD OF RECORD.--October 1963 to current year. Published as "near Denver" prior to October 1972.

REVISED RECORDS.--WDR TN-76-1: 1973-75 (P).

GAGE.--Water-stage recorder. Datum of gage is 377.05 ft (114.925 m) above mean sea level. Prior to Jan. 1, 1973, at site 1.1 mi (1.8 km) upstream. Oct. 22 to Nov. 6, 1963, at different datum and Nov. 7, 1963, to Dec. 31, 1972, at datum 12.47 ft (3.801 m) higher.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--14 years, 49.8 ft^3/s (1.410 m^3/s), 21.20 in/yr (538 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,170 ft^3/s (260 m^3/s), Apr. 19, 1973, gage height, 12.43 ft (3.789 m); maximum discharge at prior site and datum, 3,640 ft^3/s (103 m^3/s), May 13, 1967, gage height, 9.08 ft (2.768 m); minimum discharge, 3.0 ft^3/s (0.085 m^3/s) Aug. 9, 13, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1886, 14 ft (4.3 m) January 1937, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,850 ft^3/s (52.4 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 4	0245	*4500	127	9.64	2.938	June 26	2145	2080	58.9	7.37	2.246
Mar. 12	1030	3540	100	8.87	2.704	Sept.25	1615	2390	67.7	7.76	2.365

Minimum discharge, 8.8 ft^3/s (0.249 m^3/s) part or all of each day Aug. 31 to Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	14	12	15	77	22	44	14	42	10	8.8
2	11	15	14	13	15	65	25	39	14	37	10	8.8
3	11	15	13	13	16	330	35	37	14	30	9.8	8.8
4	10	14	13	13	15	1370	341	38	14	26	9.5	9.1
5	10	14	13	13	15	225	234	49	14	23	9.5	9.1
6	12	13	13	13	14	129	109	41	14	21	9.5	9.5
7	12	14	14	14	13	91	77	37	14	19	9.5	10
8	11	14	14	14	13	71	62	36	13	17	15	9.5
9	11	14	13	14	13	60	53	30	13	24	11	8.8
10	10	13	13	14	13	51	46	26	13	19	10	9.1
11	10	13	14	13	13	49	38	25	13	19	11	8.8
12	10	13	14	12	24	934	33	23	13	17	10	8.8
13	10	13	14	12	31	219	29	22	18	15	11	10
14	10	13	14	27	30	118	27	20	30	15	12	24
15	10	13	15	48	27	86	25	21	24	14	13	51
16	10	13	15	44	24	67	23	19	19	12	11	50
17	10	13	14	37	22	56	22	19	17	12	9.1	28
18	10	13	14	33	21	50	21	19	17	12	9.8	22
19	11	13	14	26	19	43	21	18	16	11	9.8	19
20	17	13	14	23	19	38	19	17	17	11	9.8	17
21	15	13	13	21	17	33	18	17	16	11	9.5	14
22	13	12	13	20	17	32	37	17	24	11	10	13
23	13	12	13	19	27	30	111	18	51	11	15	12
24	28	12	13	18	259	28	118	17	79	11	10	25
25	39	12	13	18	104	26	80	17	42	11	10	525
26	26	18	13	17	80	26	62	16	327	12	9.8	192
27	16	21	13	17	160	25	53	16	305	10	9.5	156
28	27	16	13	18	100	25	44	16	100	10	9.1	111
29	21	15	13	15	---	25	53	15	68	10	9.1	72
30	19	14	13	15	---	24	50	15	54	11	9.1	60
31	17	---	12	17	---	23	---	14	---	11	9.1	---
TOTAL	452	417	418	603	1136	4426	1888	758	1387	515	320.5	1510.1
MEAN	14.6	13.9	13.5	19.5	40.6	143	62.9	24.5	46.2	16.6	10.3	50.3
MAX	39	21	15	48	259	1370	341	49	327	42	15	525
MIN	10	12	12	12	13	23	18	14	13	10	9.1	8.8
CFSM	.46	.44	.42	.61	1.27	4.48	1.97	.77	1.45	.52	.32	1.58
IN.	.53	.49	.49	.70	1.32	5.16	2.20	.88	1.62	.60	.37	1.76

CAL YR 1976 TOTAL 18065.4 MEAN 49.4 MAX 1380 MIN 9.9 CFSM 1.55 IN 21.07
WTR YR 1977 TOTAL 13830.6 MEAN 37.9 MAX 1370 MIN 8.8 CFSM 1.19 IN 16.13

03606500 BIG SANDY RIVER AT BRUCETON, TN

LOCATION.--Lat 36°02'19", long 88°13'42", Carroll County, Hydrologic Unit 06040005, on right bank on downstream end of abutment of county bridge, 700 ft (213 m) downstream from bridge on U. S. Highway 70, 0.6 mi (1.0 km) upstream from Cherry Creek, 0.9 mi (1.4 km) east of Bruceton, and at mile 31.6 (50.8 km).

DRAINAGE AREA.--205 mi^2 (531 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 853: Drainage area. WSP 923: 1929-35.

GAGE.--Water-stage recorder. Datum of gage is 380.58 ft (116.001 m) above mean sea level. Prior to Mar. 1, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--48 years, 287 ft^3/s (8.128 m^3/s), 19.01 in/yr (483 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft^3/s (481 m^3/s) Jan. 21, 1935, gage height, 16.16 ft (4.926 m) from graph based on gage readings, from rating curve extended above 9,200 ft^3/s (261 m^3/s); minimum, 28 ft^3/s (0.79 m^3/s) Aug. 17-19, 22, Sept. 1, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1897 reached a stage of 18 ft (5.5 m), discharge, 25,000 ft^3/s (708 m^3/s), and flood in March 1919 reached a stage of 17 ft (5.2 m), discharge, 21,000 ft^3/s (595 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft^3/s (56.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 5	1715	*3460	98.0	13.26	4.042	Mar. 12	1815	2100	59.5	12.00	3.658

Minimum discharge 64 ft^3/s (1.812 m^3/s) Aug. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	201	164	140	135	366	151	184	98	95	149	72
2	106	171	173	130	137	240	296	159	88	90	115	70
3	101	159	161	130	153	572	610	256	89	88	85	70
4	98	151	157	149	183	2590	1100	633	80	86	76	73
5	96	145	154	193	183	3140	973	566	77	84	73	74
6	124	143	155	210	157	2700	849	337	76	82	69	84
7	130	144	188	207	142	1470	579	252	76	80	67	97
8	112	141	175	186	136	432	279	193	75	80	71	78
9	109	141	153	187	143	273	214	154	74	149	75	74
10	106	142	153	195	154	236	191	134	73	149	69	72
11	104	142	163	178	160	240	175	125	72	174	69	70
12	102	143	186	170	384	1660	162	119	71	142	66	69
13	101	142	172	165	349	1850	154	114	70	107	65	71
14	101	145	156	397	252	1750	149	109	149	90	83	182
15	100	156	155	489	206	1070	144	105	103	84	324	234
16	100	149	152	390	176	366	138	101	87	79	328	269
17	100	143	148	310	165	252	135	97	85	75	347	180
18	101	142	145	275	168	238	133	95	89	70	271	124
19	105	142	144	255	166	235	128	92	83	66	147	112
20	198	142	147	240	158	204	121	90	78	75	111	131
21	186	143	140	230	153	190	117	89	86	70	96	108
22	135	137	132	220	156	208	687	89	84	67	93	97
23	124	135	137	215	219	185	1340	87	149	68	201	92
24	360	137	138	210	697	172	1570	85	98	75	123	254
25	672	139	154	205	489	167	1180	94	142	71	95	748
26	579	201	180	245	414	162	597	91	432	77	86	940
27	612	344	161	210	805	168	255	88	423	72	81	1000
28	323	251	158	185	516	202	196	84	289	80	77	1010
29	190	200	150	160	---	223	223	87	146	133	76	738
30	261	167	144	145	---	179	208	91	109	140	78	549
31	276	---	150	138	---	159	---	126	---	97	76	---
TOTAL	5930	4838	4845	6759	7156	21899	13054	4926	3651	2895	3742	7742
MEAN	191	161	156	218	256	706	435	159	122	93.4	121	258
MAX	672	344	188	489	805	3140	1570	633	432	174	347	1010
MIN	96	135	132	130	135	159	117	84	70	66	65	69
CFSM	.93	.79	.76	1.06	1.25	3.44	2.12	.78	.60	.46	.59	1.26
IN.	1.08	.88	.88	1.23	1.30	3.97	2.37	.89	.66	.53	.68	1.40

CAL YR 1976 TOTAL 109638 MEAN 300 MAX 2730 MIN 80 CFSM 1.46 IN 19.90
WTR YR 1977 TOTAL 87437 MEAN 240 MAX 3140 MIN 65 CFSM 1.17 IN 15.87

03606500 BIG SANDY RIVER AT BRUCETON, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1970 to current year.

INSTRUMENTATION.--Temperature recorder since October 1970.

REMARKS.--No record June 27 to July 5, instrument malfunction.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.0°C July 25, 26, 1973, July 7, 14-17, 1977; minimum, 0.5°C Jan. 17, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 26.0°C July 7, 14-17; minimum, 0.5°C Jan. 17.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	16.0	17.0	11.0	9.5	10.0	5.5	3.5	4.5	3.0	1.5	2.0
2	18.0	15.5	16.5	10.5	8.5	9.5	6.0	4.5	5.0	2.0	1.0	1.5
3	18.0	15.5	17.0	11.5	9.5	10.5	5.5	4.0	5.0	4.0	1.5	3.0
4	18.0	16.0	17.0	11.0	9.0	9.5	6.5	4.5	5.5	4.5	3.5	4.0
5	19.0	17.0	18.5	9.5	7.0	8.5	6.5	5.0	5.5	4.5	4.0	4.5
6	19.0	17.0	18.0	9.0	9.0	8.5	7.0	6.0	6.5	4.5	4.0	4.0
7	17.0	15.0	16.0	10.0	8.5	9.0	8.0	6.0	7.0	4.5	3.5	4.0
8	15.5	14.5	14.5	9.5	7.0	8.5	6.5	5.0	5.5	4.0	3.0	3.5
9	15.0	14.0	14.5	9.5	6.5	8.5	5.0	3.5	4.5	4.0	3.0	3.5
10	15.0	13.0	14.0	10.5	9.0	10.0	6.5	4.5	5.5	4.0	1.5	2.0
11	15.0	13.0	14.0	10.0	8.0	9.0	8.5	6.5	8.0	2.0	1.0	1.5
12	15.5	13.0	14.5	8.0	6.5	7.0	9.0	8.5	8.5	2.0	1.0	1.5
13	16.5	14.5	15.5	6.5	5.5	6.0	8.5	6.5	8.0	3.5	1.5	2.0
14	16.5	14.0	15.0	6.5	6.0	6.5	7.0	5.0	6.0	3.5	2.0	3.0
15	16.0	14.0	15.0	8.0	6.5	7.0	8.0	5.5	6.5	2.0	1.5	2.0
16	16.0	14.5	15.0	8.0	5.5	6.5	7.0	6.0	6.5	3.0	1.5	2.0
17	14.5	12.0	13.5	8.0	6.0	7.0	8.0	5.5	6.5	2.0	0.5	1.5
18	13.0	10.0	11.5	9.0	6.5	8.0	8.5	6.0	7.0	1.5	1.5	1.5
19	13.5	11.0	12.0	10.0	8.0	9.5	10.0	8.0	9.0	2.0	1.0	1.5
20	13.5	12.0	12.0	10.5	9.5	10.0	10.5	7.0	9.5	2.0	1.0	1.5
21	12.0	10.0	11.0	9.5	8.0	8.5	7.0	4.5	5.5	3.0	1.0	2.0
22	11.5	9.5	10.5	8.5	6.0	7.0	4.5	3.0	3.5	3.5	1.5	2.0
23	12.0	11.0	11.5	6.5	5.0	6.0	4.5	3.0	4.0	3.5	2.0	3.0
24	14.0	12.0	13.0	8.0	5.5	6.5	4.5	3.0	4.0	4.0	3.5	4.0
25	14.5	14.0	14.5	9.0	6.5	8.0	5.5	4.0	5.0	4.5	4.0	4.0
26	14.0	13.0	13.5	11.0	9.0	10.0	5.5	4.5	5.0	4.5	3.5	4.0
27	13.5	11.0	11.5	11.5	10.5	11.0	6.0	4.0	5.5	5.0	4.0	4.5
28	11.5	9.0	10.0	11.0	6.0	8.5	7.0	6.0	6.5	4.5	3.0	4.0
29	10.0	8.5	9.5	6.0	4.0	5.0	6.5	5.0	5.5	3.0	1.5	2.0
30	10.5	10.0	10.0	4.0	3.0	3.5	5.5	4.0	4.5	3.0	1.0	2.0
31	11.0	10.5	10.5	---	---	---	5.0	3.0	3.5	3.5	1.5	3.0
MONTH	19.0	8.5	14.0	11.5	3.0	8.0	10.5	3.0	6.0	5.0	0.5	2.5

03606500 BIG SANDY RIVER AT BRUCETON, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	1.5	3.0	8.0	6.0	7.0	14.0	13.0	13.5	17.0	15.5	16.5
2	4.5	1.0	3.5	8.5	6.0	7.0	15.5	13.5	14.5	18.0	16.0	17.0
3	5.0	4.0	4.5	9.0	8.5	8.5	15.0	13.0	14.0	18.5	16.5	17.0
4	6.0	4.0	5.0	10.0	8.0	9.0	13.5	11.5	12.0	18.5	16.5	17.0
5	6.0	5.0	5.5	10.0	8.5	9.5	13.5	10.5	11.5	20.0	17.0	19.0
6	5.0	2.0	3.5	10.5	8.5	9.5	13.0	9.0	10.5	20.0	19.0	19.5
7	3.5	1.5	3.0	10.0	7.0	9.0	15.5	11.0	13.0	19.5	19.0	19.5
8	4.0	1.5	3.0	10.5	8.0	9.0	16.0	13.5	15.0	19.5	18.5	19.0
9	5.0	2.0	4.0	10.5	9.0	10.0	15.5	13.5	15.0	19.5	16.5	18.0
10	6.0	3.5	5.0	11.5	9.5	10.5	17.0	14.0	15.5	16.5	14.5	15.5
11	6.5	4.5	5.5	13.5	11.0	12.0	18.0	14.5	16.5	15.5	13.5	14.5
12	6.5	5.0	5.5	14.5	12.0	13.5	18.5	15.5	17.0	15.5	13.5	14.5
13	5.5	4.0	5.0	14.5	12.0	13.5	18.5	15.5	17.0	16.0	13.5	15.0
14	6.0	4.5	5.5	15.0	12.0	13.5	18.5	16.0	17.0	16.5	14.5	15.5
15	6.0	4.5	5.5	16.0	13.0	14.5	19.0	16.0	18.0	17.0	15.0	16.5
16	5.0	3.5	4.5	15.5	13.0	14.0	19.0	16.0	18.0	18.5	16.0	17.0
17	5.0	3.0	4.0	13.0	11.5	11.5	18.5	16.5	18.0	18.5	16.5	18.0
18	7.0	4.5	6.0	15.0	12.0	13.5	18.5	16.5	18.0	19.0	17.0	18.5
19	7.0	5.5	6.5	13.5	10.5	13.0	18.5	16.5	18.0	19.5	17.0	18.5
20	5.5	4.0	4.5	13.0	10.5	11.5	18.5	16.5	18.0	19.5	18.0	18.5
21	5.5	3.0	4.5	13.0	10.5	11.5	18.0	16.5	17.0	19.5	18.0	19.0
22	9.0	4.5	7.0	12.0	9.5	11.0	17.0	16.0	16.5	20.0	18.5	19.0
23	10.5	8.0	9.5	12.0	9.0	10.5	17.0	15.0	16.0	20.0	18.0	19.0
24	9.5	7.0	8.5	13.0	9.5	11.0	18.0	15.0	16.0	20.0	18.5	19.0
25	11.0	8.5	10.0	14.0	10.0	12.0	17.0	15.0	16.0	19.5	18.5	19.0
26	13.0	10.0	11.5	14.0	11.0	13.0	15.5	13.5	14.5	19.5	18.0	19.0
27	12.0	8.5	10.0	14.5	13.5	14.0	15.0	13.0	14.0	20.0	18.0	19.0
28	8.5	5.5	6.5	16.5	14.5	15.5	16.0	14.0	15.0	20.0	18.5	19.5
29	---	---	---	16.5	15.0	16.0	16.0	15.0	15.5	20.5	18.5	19.5
30	---	---	---	18.5	16.0	17.0	16.0	14.5	15.5	21.0	19.0	20.0
31	---	---	---	16.5	14.0	15.5	---	---	---	21.5	20.0	20.5
MONTH	13.0	1.0	5.5	18.5	6.0	12.0	19.0	9.0	15.5	21.5	13.5	18.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.0	18.5	19.5	---	---	---	22.0	21.0	21.5	24.0	21.5	23.0
2	20.5	18.5	19.5	---	---	---	21.5	20.0	21.0	24.0	22.0	23.5
3	20.0	18.0	19.0	---	---	---	21.5	19.0	20.5	23.5	22.0	22.0
4	20.0	17.0	19.0	---	---	---	22.0	20.0	21.0	23.5	21.0	22.0
5	20.5	18.0	19.5	---	---	---	23.5	20.5	22.0	23.0	21.5	22.0
6	21.5	19.0	20.0	25.0	23.0	24.0	24.5	21.5	23.0	22.0	21.5	21.5
7	20.0	17.0	18.5	26.0	23.5	24.5	24.5	22.0	23.0	23.0	21.0	22.0
8	18.5	15.5	17.0	25.5	24.0	25.0	25.0	21.5	23.5	23.0	21.0	22.0
9	19.0	16.5	18.0	24.5	23.5	24.0	24.5	22.0	23.5	21.5	20.5	21.0
10	19.0	16.5	18.5	24.0	23.5	23.5	24.0	22.0	23.5	21.5	20.0	21.0
11	21.0	18.0	19.5	24.0	23.5	24.0	24.5	21.5	23.0	20.0	18.0	19.0
12	21.5	19.0	20.5	24.5	23.5	24.5	23.5	22.0	23.0	20.5	18.5	19.5
13	22.0	20.0	21.0	25.5	24.0	25.0	24.0	22.0	23.0	21.0	19.5	20.5
14	20.5	19.5	20.0	26.0	24.5	25.0	23.0	21.5	22.0	20.5	20.0	20.0
15	20.5	19.5	20.0	26.0	24.5	25.5	21.5	21.0	21.5	20.5	20.0	20.5
16	20.5	19.0	20.0	26.0	24.5	25.0	23.0	21.5	22.0	21.0	20.5	20.5
17	20.0	19.5	19.5	26.0	24.5	25.0	23.5	22.0	23.0	21.0	20.5	21.0
18	21.5	19.0	20.5	25.5	24.0	24.5	23.0	21.0	22.0	21.5	20.5	21.0
19	22.0	20.5	21.0	25.0	23.5	24.5	21.0	19.5	20.5	21.0	20.5	21.0
20	22.0	20.5	21.0	24.5	23.5	23.5	21.0	19.0	20.0	20.5	19.0	20.0
21	21.5	20.0	21.0	25.0	23.0	24.0	21.5	19.5	20.5	19.0	18.0	18.5
22	22.0	20.5	21.5	24.5	23.0	24.0	21.0	20.0	20.5	19.5	17.0	18.5
23	22.0	21.0	21.5	24.5	23.0	23.5	21.5	20.5	21.0	19.5	18.0	19.0
24	22.0	21.0	21.5	25.0	23.5	24.0	22.0	21.0	21.5	19.5	19.0	19.0
25	21.5	21.0	21.5	24.0	23.0	23.5	22.0	20.5	21.5	19.0	18.5	18.5
26	22.0	21.0	21.5	24.0	22.0	23.0	23.0	21.0	22.0	21.0	19.0	20.0
27	---	---	---	23.5	21.0	22.0	24.0	21.5	23.0	21.5	20.5	21.0
28	---	---	---	21.5	21.0	21.0	23.5	21.5	22.0	21.5	20.0	20.5
29	---	---	---	23.0	21.5	22.0	23.0	22.0	22.0	21.0	19.0	19.5
30	---	---	---	23.5	21.5	23.0	23.5	21.0	22.0	19.0	18.5	18.5
31	---	---	---	24.0	22.0	23.5	24.0	21.5	23.0	---	---	---
MONTH	22.0	15.5	20.0	26.0	21.0	24.0	25.0	19.0	22.0	24.0	17.0	20.5
YEAR	26.0	0.5	14.0									

03609500 TENNESSEE RIVER NEAR PADUCAH, KY.

LOCATION.--Lat 37°01'11", long 88°16'50", Marshall County, Hydrologic Unit 06040006, on left bank at Gilbertsville, 4,000 ft (1,200 m) downstream from Kentucky Dam, 2.3 mi (3.7 km) upstream from Shadie Creek, 16 mi (26 km) east of Paducah, and at mile 21.6 (34.8 km).

DRAINAGE AREA.--40,200 mi^2 (104,100 km^2), approximately.

PERIOD OF RECORD.--October 1875 to September 1889 (gage heights only), October 1889 to current year. Prior to October 1931, published as "at Johnsonville, Tenn.," and October 1931 to September 1939, published as "near Johnsonville, Tenn.".

REVISED RECORDS.--WSP 1306: 1936 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 286.35 ft (87.279 m) above mean sea level. Prior to October 1939, various types of gages between 75 and 80 mi (121 and 129 km) upstream at datums from 33.16 to 34.67 ft (10.107 to 10.567 m) higher. October 1939 to September 1942, water stage recorder 16.4 mi (26.4 km) downstream at present datum. Auxiliary water stage recorder 16.4 mi (26.4 km) downstream at present datum since Oct. 1, 1942. October 1939 to Sept. 30, 1942, auxiliary water stage recorder at same site and datum as present base gage at Gilbertsville. (See WSP 1706 for details).

REMARKS.--Records good. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other lakes and reservoirs have been built above station (see p. 390 and Water Resources Data for adjoining states, 1976). Flow now almost completely regulated, and, since June 1966, Barkley-Kentucky Canal diverts water from or to Lake Barkley in Cumberland River basin.

AVERAGE DISCHARGE.--76 years (1889-1965, prior to opening of Barkley-Kentucky Canal), 64,060 ft^3/s (1,814 m^3/s), unadjusted; 12 years (1965-77, since opening of Barkley-Kentucky Canal), 65,290 ft^3/s (1,849 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500,000 ft^3/s (14,200 m^3/s) Feb. 17, 1948; maximum gage height, 62.43 ft (19.029 m) Feb. 2, 1937, at Gilbertsville, present datum; minimum daily discharge, 60 ft^3/s (1.70 m^3/s) May 16, 1961.
Maximum discharge since closure of Kentucky Dam on Aug. 30, 1944, 500,000 ft^3/s (14,200 m^3/s) Feb. 27, 1948.
Maximum discharge since opening of Barkley-Kentucky Canal in June 1966, 420,000 ft^3/s (11,900 m^3/s) Mar. 17, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 282,000 ft^3/s (7,990 m^3/s) Apr. 8; maximum gage height, 43.16 ft (13.155 m) Apr. 10; minimum daily discharge, 21,000 ft^3/s (595 m^3/s) Feb. 22; minimum gage height, 13.31 ft (4.057 m) July 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30700	43600	47000	46600	31600	80000	54900	53600	32100	37400	31600	34000
2	33300	43600	36900	46700	37100	79500	55800	53800	31800	29100	34500	33600
3	31800	44500	36500	45500	35900	77500	54400	51400	31500	27000	35000	26600
4	32600	44300	36500	47700	39400	108000	75000	53000	32200	32400	31800	26000
5	32900	44400	28000	48700	42600	164000	133000	55800	35000	35300	31900	26300
6	33900	36500	36300	52400	36900	195000	205000	56600	38700	34800	31800	32700
7	32200	34300	40400	53100	34600	200000	260000	52000	36300	40100	31900	34400
8	32000	33800	42500	52300	35400	202000	278000	50900	36100	38200	28900	38000
9	29200	30300	41300	53200	35600	197000	269000	48600	35000	36600	28400	37700
10	24100	35000	42900	54600	35900	185000	244000	48900	35400	33200	28200	39300
11	24200	35200	40000	54000	29000	177000	212000	46800	35300	34300	28300	39300
12	23100	36200	43100	56000	30300	182000	188000	52500	35100	31400	27900	28300
13	34500	35400	50900	58000	32300	196000	170000	50800	36300	36000	28000	28700
14	33900	34800	48100	60000	34500	199000	150000	46000	40600	33100	29200	28100
15	36300	36200	49300	67100	40900	202000	126000	43200	39000	36000	31000	31000
16	38200	35100	48100	90800	40800	199000	99100	37900	32200	33100	39300	31100
17	40300	35900	46900	94800	35300	200000	66500	33000	32000	33900	40800	30200
18	32300	35500	46500	94700	33600	186000	53500	41400	32300	35000	39300	31700
19	29600	35300	47700	94000	30100	155000	54900	39500	33100	33500	38700	31600
20	32700	33100	44400	88000	27400	113000	42700	39600	32600	34000	39200	40100
21	33600	35100	48800	74000	26000	73000	45500	39100	33000	34300	37800	50300
22	32400	31000	46600	56000	21000	57900	45900	38200	33400	33900	31400	39900
23	32900	28400	48000	54000	28600	55600	55400	32600	33100	34700	31000	40000
24	32500	35500	46500	52000	41500	53600	63700	31900	35400	29400	27500	39300
25	36900	24900	38900	48000	55600	55000	74900	32500	36600	30300	30500	34900
26	45400	27200	39300	50000	73100	56000	70000	33400	36100	33300	39900	42100
27	45400	36900	45700	53100	81100	52900	65200	32200	38400	40200	28400	53200
28	44800	30500	46400	52700	80400	52500	70900	32200	40100	40400	28900	52900
29	43800	38600	47000	54300	---	42700	68800	33000	38700	37600	31500	53000
30	43100	43200	48000	55300	---	44100	59000	32300	37400	38100	34400	52400
31	43500	---	47500	53100	---	54900	---	32800	---	32200	33600	---
TOTAL	1072100	1074300	1356000	1860700	1106500	3895200	3411100	1325500	1054800	1068800	1010600	1106700
MEAN	34580	35810	43740	60020	39520	125700	113700	42760	35160	34480	32600	36890
MAX	45400	44500	50900	94800	81100	202000	278000	56600	40600	40400	40800	53200
MIN	23100	24900	28000	45500	21000	42700	42700	31900	31500	27000	27500	26000

CAL YR 1976 TOTAL 18663300 MEAN 50990 MAX 167000 MIN 18800
WTR YR 1977 TOTAL 19342300 MEAN 52990 MAX 278000 MIN 21000

RESERVOIRS IN TENNESSEE RIVER BASIN, TN

03468500 DOUGLAS LAKE.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at Douglas Dam on French Broad River, 6.5 mi (10.5 km) north of Sevierville, and at mi 32.3 (52.0 km). DRAINAGE AREA, 4,541 mi^2 (11,761 km^2). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir formed by concrete main dam and 10 saddle dams. Spillway equipped with 11 radial gates, 32 ft (10 m) high by 40 ft (12 m) wide and 8 sluice gates 10 ft (3 m) high by 5.67 ft (1.73 m) wide. Closure of dam was made Feb. 19, 1943; water in reservoir first reached minimum pool elevation Feb. 25, 1943. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,002.00 ft (305.410 m), top of gates, is 743,600 cfs-days (1,820 hm^3), of which 703,100 cfs-days (1,720 hm^3) is controlled storage above elevation 920.00 ft (280.416 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 760,000 cfs-days (1,860 hm^3) July 25, 1949, elevation, 1,001.79 ft (305.346 m); minimum after first filling, 1,000 cfs-days (2.447 hm^3) Jan. 16, 1956, elevation, 883.7 ft (269.35 m), estimated.

EXTREMES FOR CURRENT YEAR: Maximum contents, 609,300 cfs-days (1,491 hm^3) Apr. 9, elevation, 993.10 ft (302.697 m); minimum, 90,600 cfs-days (221.7 hm^3) Feb. 12, elevation, 935.34 ft (255.092 m).

03476000 SOUTH HOLSTON LAKE.--Lat 36°31'15", long 82°05'11", Sullivan County, Hydrologic Unit 06010102, 470 ft (140 m) upstream from South Holston Dam on South Fork Holston River, 7.0 mi (11.3 km) southeast of Bristol, Virginia-Tennessee, and at mi 49.8 (80.1 km). DRAINAGE AREA, 703 mi^2 (1,821 km^2). PERIOD OF RECORD, November 1950 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level. Prior to May 11, 1951, nonrecording gage at same site and datum.

Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft (40 m) in diameter with six piers 3 ft (1 m) wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft (10 m) in diameter. Closure of dam was made Nov. 20, 1950; water in reservoir first reached minimum pool elevation Jan. 25, 1951. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,742.00 ft (530.962 m), spillway crest, is 385,200 cfs-days (942.6 hm^3), of which 324,200 cfs-days (793.3 hm^3) is controlled storage above elevation 1,616.00 ft (492.557 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 347,100 cfs-days (849.3 hm^3) Apr. 3, 1975, elevation, 1,732.82 ft (528.164 m); minimum after first filling, 57,700 cfs-days (141.2 hm^3) Jan. 13, 1956, elevation, 1,614.15 ft (491.993 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 301,900 cfs-days (738.7 hm^3) Apr. 18, elevation, 1,720.97 ft (524.552 m); minimum, 165,900 cfs-days (406.0 hm^3) Sept. 30, elevation, 1,675.62 ft (510.729 m).

03483500 WATAUGA LAKE.--Lat 36°19'20", long 82°07'16", Carter County, Hydrologic Unit 06010103, at Watauga Dam on Watauga River, 5 mi (8 km) east of Elizabethton, and at mi 36.7 (59.0 km). DRAINAGE AREA, 468 mi^2 (1,212 km^2). PERIOD OF RECORD, December 1948 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft (40 m) in diameter with six piers 3 ft (1 m) wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft (10 m) in diameter. Closure of dam was made Dec. 1, 1948; water in reservoir first reached minimum pool elevation Dec. 31, 1948. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,975.00 ft (601.980 m), spillway crest, is 341,300 cfs-days (835.2 hm^3), of which 315,000 cfs-days (770.8 hm^3) is controlled storage above elevation 1,815.00 ft (553.212 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 293,300 cfs-days (717.7 hm^3) Apr. 6, 1974, elevation, 1,961.07 ft (597.734 m); minimum after first filling, 25,100 cfs-days (61.42 hm^3) Jan. 13, 1956, elevation, 1,813.47 ft (552.746 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 242,900 cfs-days (594.4 hm^3) Apr. 13, elevation, 1,944.89 ft (592.802 m); minimum, 161,600 cfs-days (395.4 hm^3) Feb. 21, elevation, 1,914.46 ft (583.527 m).

03486800 BOONE LAKE.--Lat 36°26'26", long 82°26'16", Sullivan County, Hydrologic Unit 06010102, at Boone Dam on South Fork Holston River, 0.7 mi (1.1 km) northeast of Spurgeon, 1.3 mi (2.1 km) downstream from Watauga River, and at mi 18.6 (29.9 km). DRAINAGE AREA, 1,840 mi^2 (4,766 km^2). PERIOD OF RECORD, December 1952 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway is equipped with five radial gates, 35 ft (11 m) high by 35 ft (11 m) wide. Storage began Dec. 16, 1952; water in reservoir first reached minimum pool elevation Jan. 5, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,385.0 ft (422.15 m), top of gates, is 97,500 cfs-days (238.6 hm^3), of which 74,800 cfs-days (183.0 hm^3) is controlled storage above elevation 1,330 ft (405.4 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 99,100 cfs-days (242.5 hm^3) May 19, 1964, elevation 1,384.99 ft (422.145 m); minimum after first filling, 21,300 cfs-days (52.12 hm^3) Jan. 23, 1956, elevation, 1,327.06 ft (404.488 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 94,600 cfs-days (231.5 hm^3) June 28, elevation, 1,383.67 ft (421.743 m); minimum, 41,100 cfs-days (100.6 hm^3) Feb. 21, elevation, 1,349.81 ft (411.422 m).

03487000 FORT PATRICK HENRY LAKE.--Lat 36°29'53", long 82°30'32", Sullivan County, Hydrologic Unit 06010102, at Fort Patrick Henry Dam on South Fork Holston River, 0.2 mi (0.3 km) upstream from bridge on U. S. Highway 23, 4.5 mi (7.2 km) southeast of Kingsport, and at mi 8.2 (13.2 km). DRAINAGE AREA, 1,903 mi^2 (4,929 km^2). PERIOD OF RECORD, October 1953 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway is equipped with five radial gates, 35 ft (11 m) high by 35 ft (11 m) wide. Storage began Oct. 27, 1953; water in reservoir first reached minimum pool elevation Dec. 8, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,263 ft (385.0 m), top of gates, is 13,600 cfs-days (33.28 hm^3), of which 2,200 cfs-days (5.383 hm^3) is controlled storage above elevation 1,258 ft (383.4 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 14,000 cfs-days (34.26 hm^3) Feb. 11, 1954, elevation, 1,263.80 ft (385.206 m), minimum after first filling, 9,300 cfs-days (22.76 hm^3) Mar. 16, 1954, elevation, 1,252.32 ft (381.707 m)

EXTREMES FOR CURRENT YEAR: Maximum contents, 13,500 cfs-days (33.03 hm^3) Jan. 3, elevation, 1,262.90 ft (384.932 m); minimum, 11,200 cfs-days (27.41 hm^3) June 14, elevation, 1,257.35 ft (383.240 m).

RESERVOIRS IN TENNESSEE RIVER BASIN, TN--CONTINUED

03493500 CHEROKEE LAKE.--Lat 36°10'00", long 83°29'55", Jefferson County, Hydrologic Unit 06010104, at Cherokee Dam on Holston River, 0.3 mi (0.5 km) upstream from bridge on State Highway 92, 2.7 mi (4.3 km) upstream from Mill Spring Creek, 2.8 mi (4.5 km) north of Jefferson City, and at mi 52.3 (84.2 km). DRAINAGE AREA, 3,429 mi^2 (8,881 km^2). PERIOD OF RECORD, December 1941 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with nine radial gates 32 ft (10 m) high by 40 ft (12 m) wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 6, 1942. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,075.0 ft (327.66 m), top of gates, is 778,400 cfs-days (1,905 hm^3), of which 736,200 cfs-days (1,801 hm^3) is controlled storage above elevation 980.0 ft (298.70 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 779,400 cfs-days (1,907 hm^3) May 11, 1944, maximum elevation, 1,074.47 ft (327.498 m) May 30, 1973; minimum after first filling,48,400 cfs-days (118.4 hm^3) Jan. 7, 1954, elevation, 980.77 ft (298.939 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 581,100 cfs-days (1,422 hm^3) May 12, elevation, 1,060.97 ft (323.384 m); minimum, 165,000 cfs-days (403.8 hm^3) Feb. 15, elevation, 1,014.26 ft (309.146 m).

03499500 FORT LOUDOUN LAKE.--Lat 35°47'30", long 84°14'35", Loudon County, Hydrologic Unit 06010201, at Fort Loudoun Dam on Tennessee River, 1 mi (2 km) northeast of Lenoir City, and at mi 602.3 (969.1 km). DRAINAGE AREA, 9,550 mi^2 (24,730 km^2). PERIOD OF RECORD, July 1943 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir formed by concrete dam with earth embankment. Spillway equipped with 14 radial gates 32 ft (10 m) high by 40 ft (12 m) wide. Closure of dam was made Aug. 2, 1943; water in reservoir first reached ordinary minimum pool elevation Sept. 4, 1943. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 815.00 ft (248.412 m), top of gates, is 198,100 cfs-days (484.8 hm^3), of which 55,900 cfs-days (136.8 hm^3) is controlled flood storage above elevation 807.00 ft (245.974 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 815.00 ft (248.412 m) Sept. 11, 1943, May 14, 1945; minimum after first filling, 805.54 ft (245.529 m) Jan. 18, 1954. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 184,000 cfs-days (450.2 hm^3), Apr. 5; maximum elevation, 813.29 ft (247.801 m) June 22; minimum midnight contents, 143,000 cfs-days (349.9 hm^3) Jan. 30; minimum elevation, 807.00 ft (245.974 m) Feb. 9.

03518200 CHILHOWEE LAKE.--Lat 35°32'43", long 84°03'02", Monroe County, Hydrologic Unit 06010204, at Chilhowee Dam on Little Tennessee River, 2.4 mi (3.9 km) southwest of Chilhowee, 2.6 mi (4.2 km) upstream from Citico Creek, 10.1 mi (16.2 km) downstream from Calderwood Dam, and at mi 33.6 (54.1 km). DRAINAGE AREA, 1,977 mi^2 (5,120 km^2). PERIOD OF RECORD, August 1957 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with rockfill end abutments. Spillway controlled by six radial gates 38 ft (12 m) high by 35 ft (11 m) wide. Closure of dam was made June 9, 1957; storage began Aug. 1, 1957; water in reservoir first reached minimum pool elevation Aug. 9, 1957. Total capacity at elevation 874.0 ft (266.40 m), top of gates, is 24,800 cfs-days (60.68 hm^3), of which 3,400 cfs-days (8.320 hm^3) is controlled storage above elevation 870.0 ft (265.18 m), minimum pool. Reservoir is used for navigation, flood control, and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 25,400 cfs-days (62.15 hm^3) May 28, 1973, elevation, 874.60 ft (266.578 m); minimum after first filling, 18,100 cfs-days (44.29 hm^3) May 18, 1963, elevation, 865.94 ft (263.938 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 24,900 cfs-days (60.93 hm^3) Apr. 5, elevation, 874.09 ft (266.423 m); minimum, 19,400 cfs-days (47.47 hm^3) Mar. 9, elevation, 867.52 ft (264.420 m).

03532500 NORRIS LAKE.--Lat 36°13'29", long 84°05'29", Anderson County, Hydrologic Unit 06010205, at Norris Dam on Clinch River, 2.5 mi (4.0 km) northwest of Norris, and at mi 79.8 (128.4 km). DRAINAGE AREA, 2,912 mi^2 (7,542 km^2). PERIOD OF RECORD, June 1935 to current year. GAGE, water-stage recorder. Datum of gage is 0.11 ft (0.034 m) above mean sea level. Gage readings have been reduced to elevations above mean sea level.

Reservoir is formed by concrete gravity dam with three drum gates 100 ft (30 m) wide by 14 ft (4 m) high. Some storage began in June 1935; dam was completely closed and placed in operation Mar. 4, 1936; water in reservoir first reached minimum pool elevation Mar. 24, 1936. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,034.1 ft (315.19 m), top of gates, is 1,286,600 cfs-days (3,148 hm^3), of which 1,140,400 cfs-days (2,791 hm^3) is controlled storage above elevation 930.11 ft (283.498 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 1,236,700 cfs-days (3,026 hm^3) Feb. 11, 1937, elevation, 1,031.21 ft (314.313 m); minimum after first filling, 75,500 cfs-days (184.7 hm^3) Jan. 24, 1956, elevation, 909.46 ft (277.203 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 1,036,000 cfs-days (2,535 hm^3) Apr. 10, elevation,1,020.55 ft (311.064 m); minimum, 418,100 cfs-days (1,023 hm^3) Feb. 23, elevation, 972.41 ft (296.391 m).

03535900 MELTON HILL LAKE.--Lat 35°53'04", long 84°18'01", Loudon-Roane County line, Hydrologic Unit 06010207, 9 mi (14 km) southwest of Oak Ridge, 19 mi (31 km) west of Knoxville, 57 mi (92 km) downstream from Norris Dam on Clinch River, and at mi 23.1 (37.2 km). DRAINAGE AREA, 3,343 mi^2 (8,658 km^2). PERIOD OF RECORD, August 1962 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete gravity dam. Spillway is equipped with three radial gates, each 42 ft (13 m) high by 40 ft (12 m) wide. Dam completed and storage began May 1, 1963; water in reservoir first reached minimum pool elevation May 23, 1963. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 796 ft (242.6 m), top of gates, is 63,500 cfs-days (155.4 hm^3), of which 16,100 cfs-days (39.40 hm^3) is controlled storage above elevation 790.0 ft (240.79 m), minimum pool. Reservoir is used for navigation, power, and recreation. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 64,900 cfs-days (158.8 hm^3) Mar. 16, 1973, elevation, 796.45 ft (242.758 m); minimum after first filling, 35,100 cfs-days (85.89 hm^3) Feb. 9, 1966, elevation, 784.10 ft (238.994 m). (corrected)

EXTREMES FOR CURRENT YEAR: Maximum contents, 62,800 cfs-days (153.7 hm^3) Apr. 4, elevation, 795.76 ft (242.548 m); minimum, 46,900 cfs-days (114.8 hm^3) Jan. 11, elevation, 789.75 ft (240.716 m).

RESERVOIRS IN TENNESSEE RIVER BASIN, TN--CONTINUED

03543000 WATTS BAR LAKE.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06010201, at Watts Bar Dam on Tennessee River, 6.5 mi (10.4 km) southeast of Spring City, 72.4 mi (116.5 km) downstream from Fort Loudoun Dam, and at mi 529.9 (852.6 km). DRAINAGE AREA, 17,310 mi^2 (44,830 km^2), approximately. PERIOD OF RECORD, October 1941 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 radial gates 32 ft (10 m) high by 40 ft (12 m) wide, also one 2-section leaf trashway gate 16.3 ft (5.0 m) high by 24 ft (7 m) wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 745.0 ft (227.08 m), top of gates, is 592,400 cfs-days (1,450 hm^3), of which 191,100 cfs-days (467.6 hm^3) is controlled flood storage above elevation 735.0 ft (224.03 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 745.40 ft (227.198 m) Mar. 17, 1973; minimum after first filling, 733.44 ft (223.552 m) Mar. 20, 1945. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 570,000 cfs-days (1,395 hm^3) Apr. 5; maximum elevation, 744.51 ft (226.927 m) Apr. 5; minimum midnight contents, 405,000 cfs-days (991.0 hm^3) Mar. 28; minimum elevation, 734.83 ft (223.976 m) Jan. 31.

03564000 LAKE OCOEE.--Lat 35°05'40", long 84°38'53", Polk County, Hydrologic Unit 06020003, at Lake Ocoee Dam on Ocoee River at Parksville, 13.8 mi (22.2 km) east of Cleveland, and at mi 11.9 (19.1 km). DRAINAGE AREA, 595 mi^2 (1,541 km^2). PERIOD OF RECORD, June 1914 to current year. Prior to October 1953, published as "Parksville (Ocoee No. 1) Reservoir," and October 1953 to September 1968, as "Parksville Lake." GAGE, non-recording gage. Datum of gage is 6.89 ft (2.100 m) above mean sea level. Gage readings have been reduced to elevations above mean sea level.

Reservoir is formed by concrete dam with 347 ft (110 m) of spillway. Spillway is equipped with four flood-gates 6 ft (2 m) high by 20 ft (6 m) wide and 265 ft (80 m) of flashboards about 5.7 ft (2 m) high. Crest of spillway under gates is at elevation 830.82 ft (253.234 m); remainder of spillway is 1.0 ft (0.3 m) higher. Dam completed and storage began in 1911. Capacity of reservoir has been considerably reduced by silting. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 837.55 ft (255.285 m), about top of flashboards, is 43,500 cfs-days (106.4 hm^3), of which 16,900 cfs-days (41.35 hm^3) is controlled storage above elevation 816.9 ft (248.99 m), minimum pool. Reservoir is used for power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum midnight contents observed, 53,300 cfs-days (130.4 hm^3) July 9, 1916; maximum midnight elevation observed, 840.2 ft (256.09 m) Feb. 10, 1946; minimum contents observed, 27,300 cfs-days (66.80 hm^3) Jan. 27, 1956, elevation, 817.7 ft (249.23 m); minimum midnight elevation observed, 814.8 ft (248.35 m) Dec. 14, 1934.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 45,200 cfs-days (110.6 hm^3) Apr. 5, elevation, 839.2 ft (255.79 m); minimum contents observed, 34,000 cfs-days (83.20 hm^3) Jan. 21, elevation, 827.2 ft (252.13 m).

03566500 CHICKAMAUGA LAKE.--Lat 35°06'07", long 85°13'42", Hamilton County, Hydrologic Unit 06020001, at Chickamauga Dam on Tennessee River, 5.8 mi (9.3 km) northeast of Chattanooga, 58.9 mi (94.8 km) downstream from Watts Bar Dam, and at mi 471.0 (757.8 km). DRAINAGE AREA, 20,790 mi^2 (53,850 km^2), approximately. PERIOD OF RECORD, October 1939 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates 40.44 ft (12.33 m) high by 40 ft (12 m) wide. Storage began Feb. 6, 1940; water in reservoir first reached minimum navigation pool elevation Mar. 10, 1940. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 685.44 ft (208.922 m), top of gates, is 372,600 cfs-days (911.8 hm^3), of which 175,000 cfs-days (428.2 hm^3) is controlled flood storage above elevation 675.0 ft (205.74 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 686.10 ft (209.123 m) Mar. 18, 1973; minimum after first filling, 673.27 ft (205.213 m) Jan. 21, 1942. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 371,000 cfs-days (907.8 hm^3) Apr. 5; maximum elevation, 684.17 ft (208.538 m) Apr. 6; minimum midnight contents, 200,000 cfs-days (489.4 hm^3) Mar. 3; minimum elevation, 674.96 ft (205.728 m) Feb. 5.

03570520 NICKAJACK LAKE.--Lat 35°00'07", long 85°37'14", Marion County, Hydrologic Unit 06020001, at Nickajack Dam on Tennessee River, 2 mi (3 km) upstream from Sequatchie River, 5 mi (8 km) south of Jasper, 46.3 mi (74.5 km) downstream from Chickamauga Dam, and at mi 424.7 (683.3 km). DRAINAGE AREA, 21,870 mi^2 (56,640 km^2), approximately. PERIOD OF RECORD, December 1967 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with earth embankments on each side. The spillway, with crest at elevation 595.0 ft (181.36 m), is equipped with 10 radial gates, each 40 ft (12 m) high by 40 ft (12 m) wide. A trash gate, 5.5 ft (1.7 m) high by 15 ft (5 m) wide, is located between the spillway and powerhouse. Dam was completed and storage began on Dec. 14, 1967. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 635.0 ft (193.55 m), top of gates, is 127,200 cfs-days (311.3 hm^3), of which 16,200 cfs-days (39.64 hm^3) is controlled storage above elevation 632.0 ft (192.63 m), ordinary minimum. Reservoir is used for navigation and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 634.99 ft (193.545 m) Apr. 19, 1969; minimum after first filling, 630.82 ft (192.274 m) Feb. 20, 1968. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 149,000 cfs-days (364.6 hm^3) Apr. 5; maximum elevation, 634.20 ft (193.304 m) May 22; minimum midnight contents, 114,000 cfs-days (279.0 hm^3) Oct. 4; minimum elevation, 632.00 ft (192.634 m) Mar. 16.

03579000 WOODS RESERVOIR.--Lat 35°17'54", long 86°05'48", Franklin County, Hydrologic Unit 06030003, at Elk River Dam on Elk River, 1.2 mi (1.9 km) upstream from Spring Creek, 2.5 mi (4.0 km) northeast of Estill Springs, 6.8 mi (10.9 km) upstream from bridge on U. S. Highway 41-A, and at mi 170.0 (273.5 km). DRAINAGE AREA, 263 mi^2 (681 km^2). PERIOD OF RECORD, May 1952 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete gravity and earthfill-type dam with riprapped embankments. Spillway equipped with three radial gates, 24 ft (7 m) high by 50 ft (15 m) wide and two sluice gates 6 ft (2 m) high by 4 ft (1 m) wide. Closure of dam was made May 1, 1952; water in reservoir first reached minimum pool elevation Feb. 6, 1953. Total capacity at elevation 962.0 ft (293.22 m), surcharge pool, is 44,400 cfs-days (108.6 hm^3), of which 9,900 cfs-days (24.22 hm^3) is controlled storage above elevation 957.0 ft (291.69 m), minimum pool. Reservoir is used for cooling water, flood control, and recreational purposes. Twice-daily gage readings (0600 and 2400 hours) furnished by U. S. Air Force.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 42,300 cfs-days (103.5 hm^3) Apr. 21, 22, 1956, elevation, 960.98 ft (292.907 m); minimum after first filling, 26,300 cfs-days (64.36 hm^3) Nov. 8-11, 1953, elevation, 951.93 ft (290.148 m).

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 40,100 cfs-days (98.12 hm^3) Apr. 3, elevation, 959.91 ft (292.581 m); minimum midnight contents, 36,200 cfs-days (88.58 hm^3) Nov. 23, 24, elevation, 957.91 ft (291.971 m).

RESERVOIRS IN TENNESSEE RIVER BASIN, TN--CONTINUED

03580740 TIMS FORD LAKE.--Lat 35°11'51", long 86°16'41", Franklin County, Hydrologic Unit 06030003, in intake tower near left bank at Tims Ford Dam on Elk River, 0.4 mi (0.6 km) upstream from bridge on State Highway 50, 9.5 mi (15.3 km) west of Winchester, and at mi 133.4 (214.6 km). DRAINAGE AREA, 529 mi^2 (1,370 km^2). PERIOD OF RECORD, December 1970 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir formed by concrete dam with compacted rockfill impervious earth core embankments. Spillway equipped with three radial gates 42 ft (13 m) high by 40 ft (12 m) wide. Storage began Dec. 1, 1970; water in reservoir first reached minimum pool elevation Feb. 23, 1971, and first filling was completed June 3, 1971. Total capacity at elevation 895 ft (272.8 m), top of gates, is 306,500 cfs-days (750.0 hm^3), of which 160,300 cfs-days (392.2 hm^3) is controlled storage above elevation 860 ft (262.1 m), minimum pool. Reservoir is used for flood control, power, and recreation. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 296,300 cfs-days (725.0 hm^3) Mar. 17, 1973, elevation, 893.24 ft (272.260 m); minimum after first filling 154,000 cfs-days (376.8 hm^3) Oct. 15, 1972, elevation, 862.24 ft (262.811 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 293,500 cfs-days (718.2 hm^3) Apr. 6, elevation, 892.76 ft (272.113 m); minimum, 192,000 cfs-days (469.8 hm^3) Feb. 17, elevation, 872.07 ft (265.807 m).

03593000 PICKWICK LAKE.--Lat 35°04'16", long 88°15'04", Hardin County, Hydrologic Unit 06040001, at Pickwick Landing Dam on Tennessee River, 1.5 mi (2.4 km) north of town of Pickwick Dam, 6.1 mi (9.8 km) upstream from Lick Creek, 52.7 mi (84.8 km) downstream from Wilson Dam, and at mi 206.7 (332.6 km). DRAINAGE AREA, 38,820 mi^2 (85,000 km^2), approximately. PERIOD OF RECORD, October 1937 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with twenty-two 2-section lift gates 40 ft (12 m) high by 40 ft (12 m) wide, one of which is used as a trash gate. Dam completed and storage began Feb. 8, 1938; water in reservoir first reached minimum pool elevation Feb. 18, 1938. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 418.0 ft (127.41 m), top of gates, is 557,100 cfs-days (1,363 hm^3), of which 210,200 cfs-days (514.4 hm^3) is controlled flood storage above elevation 408.0 ft (124.36 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 419.49 ft (127.860 m) Mar. 30, 1944; minimum after first filling, 407.12 ft (124.090 m) Dec. 18, 1944. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 542,000 cfs-days (1,326 hm^3) Apr. 5; maximum elevation, 416.08 ft (126.821 m) Apr. 5; minimum midnight contents, 360,000 cfs-days (880.9 hm^3) Feb. 7; minimum elevation, 407.86 ft (124.316 m) Dec. 20.

03596460 NORMANDY LAKE.--Lat 35°27'55", long 86°14'48", Coffee County, Hydrologic Unit 06040002, at Normandy Dam on Duck River, 1.5 mi (2.4 km) northeast of Normandy, 2.6 mi (4.2 km) downstream from Riley Creek, 8 mi (13 km) north of Tullahoma, and at mi 248.6 (400.0 km). DRAINAGE AREA, 195 mi^2 (505 km^2). PERIOD OF RECORD, January 1976 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete gravity dam with riprapped and rolled earthfill embankment on left side. Spillway is equipped with two radial gates, 40 ft (12 m) high by 36 ft (11 m) wide. Storage began Jan. 5, 1976; water in reservoir first reached minimum pool elevation Mar. 22, 1976. Total capacity (based on 1976 survey; new capacity table put into use Jan. 1, 1977) at elevation 880 ft (268.2 m), top of gates, is 64,000 cfs-days (156.6 hm^3), of which 30,400 cfs-days (74.39 hm^3) is controlled storage above elevation 859 ft (261.8 m), minimum pool. Reservoir is used for flood control, water supply, water quality control, recreation, and shoreline development. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 61,800 cfs-days (151.2 hm^3) Apr. 5, 1977, elevation, 878.66 ft (276.816 m); minimum after first filling, 33,600 cfs-days (82.22 hm^3) Jan. 1, 1977, elevation, 859.00 ft (261.823 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 61,800 cfs-days (151.2 hm^3) Apr. 5, elevation, 878.66 ft (276.816 m); minimum, 33,600 cfs-days (82.22 hm^3) Jan. 1, elevation, 859.00 ft (261.823 m).

03609000 KENTUCKY LAKE.--Lat 37°00'49", long 88°16'06", Marshall County, Ky., Hydrologic Unit 06040006, at Kentucky Dam on Tennessee River at Gilbertsville, and at mi 22.4 (36.0 km). DRAINAGE AREA, 40,200 mi^2 (104,100 km^2), approximately. PERIOD OF RECORD, July 1944 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level.

Reservoir is formed by concrete dam with 24 lift gates 50 ft (15 m) high by 40 ft (12 m) wide. Storage began Aug. 16, 1944, and final closure was Aug. 30, 1944. Water in reservoir reached minimum pool elevation Apr. 7, 1945. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 375.0 ft (114.30 m), top of gates, is 3,090,000 cfs-days (7,561 hm^3), of which 2,020,700 cfs-days (4,945 hm^3) is controlled storage above 354.0 ft (107.90 m), ordinary minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

Barkley-Kentucky Canal opened July 13, 1966, for navigation and power use. Canal is 1.75 miles (2.82 km) long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi (3.5 km) upstream from Barkley Dam. For daily discharges through the canal, see Kentucky reports.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 369.01 ft (112.474 m) Mar. 28, 1973; minimum after first filling, 348.02 ft (106.076 m) Mar. 11, 1961. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 1,727,000 cfs-days (4,226 hm^3) Apr. 8; maximum elevation, 359.84 ft (109.679 m) Apr. 28; minimum midnight contents, 1,078,000 cfs-days (2,638 hm^3) Nov. 21; minimum elevation, 353.25 ft (107.671 m) Jan. 28.

OTHER RESERVOIRS.--The following small reservoirs in the Tennessee River basin are described below, but records of contents are not published herein.

03466400 DAVY CROCKETT LAKE on Nolichucky River at Nolichucky Dam, Tn., with a total capacity of 1,300 cfs-days (3.181 hm^3), of which 900 cfs-days (2.202 hm^3) is controlled storage.

03517900 CALDERWOOD LAKE on Little Tennessee River at Calderwood, Tn., with a total capacity of 20,800 cfs-days (50.90 hm^3) of which 2,060 cfs-days (5.041 hm^3) is controlled storage.

03562500 OCOEE NO. 3 LAKE on Ocoee River at Ocoee No. 3 Dam, 5.0 miles (8.0 km) west of Ducktown, Tn., with a total capacity of 2,040 cfs-days (4.992 hm^3), of which 1,900 cfs-days (4.649 hm^3) is controlled storage. Records of contents previous to 1971 water year published.

RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03468500 DOUGLAS LAKE			03476000 SOUTH HOLSTON LAKE			03483500 WATAUGA LAKE		
Sept. 30.....	963.31	275000	-	1692.90	211800	-	1928.71	197700	-
Oct. 31.....	966.25	301500	+26500	1697.51	225300	+13500	1927.43	194400	-3300
Nov. 30.....	952.27	186900	-114600	1690.30	204500	-20800	1925.61	189700	-4700
Dec. 31.....	942.14	123700	-63200	1693.75	214300	+9800	1927.20	193800	+4100
CAL YR 1976	-	-	-17500	-	-	+27300	-	-	+6900
Jan. 31.....	939.18	108300	-15400	1683.48	185800	-28500	1917.03	167800	-26000
Feb. 28.....	945.39	142200	+33900	1688.29	198900	+13100	1919.49	174200	+6400
Mar. 31.....	971.65	353800	+211600	1699.35	230800	+31900	1933.26	210000	+35800
Apr. 30.....	990.42	573800	+220000	1719.08	295200	+64400	1943.11	237800	+27800
May 31.....	986.27	519900	-53900	1714.06	277800	-17400	1942.68	236600	-1200
June 30.....	982.80	477200	-42700	1710.31	265300	-12500	1940.46	230200	-6400
July 31.....	971.96	356900	-120300	1702.93	241700	-23600	1935.38	215900	-14300
Aug. 31.....	961.00	255000	-101900	1693.02	212200	-29500	1935.34	215800	-100
Sept. 30.....	967.80	316000	+61000	1675.62	165900	-46300	1936.36	218600	+2800
WTR YR 1977	-	-	+41000	-	-	-45900	-	-	+20900
	03486800 BOONE LAKE			03487000 FORT PATRICK HENRY LAKE			03493500 CHEROKEE LAKE		
Sept. 30.....	1379.29	85400	-	1259.49	12100	-	1034.81	305800	-
Oct. 31.....	1371.61	71400	-14000	1262.35	13300	+1200	1042.93	377800	+72000
Nov. 30.....	1365.69	61700	-9700	1261.08	12700	-600	1037.32	327200	-50600
Dec. 31.....	1359.78	53300	-8400	1261.06	12700	0	1032.13	283900	-43300
CAL YR 1976	-	-	+6300	-	-	+400	-	-	+48500
Jan. 31.....	1353.93	46200	-7100	1258.80	11800	-900	1019.62	195800	-88100
Feb. 28.....	1356.95	50000	+3800	1258.88	11800	0	1020.82	203300	+7500
Mar. 31.....	1367.50	64600	+14600	1261.00	12700	+900	1038.75	339800	+136500
Apr. 30.....	1380.77	88400	+23800	1262.05	13100	+400	1058.95	555400	+215600
May 31.....	1381.88	90800	+2400	1261.36	12800	-300	1056.46	524800	-30600
June 30.....	1382.27	91600	+800	1261.33	12800	0	1050.41	454600	-70200
July 31.....	1381.87	90800	-800	1259.61	12100	-700	1043.08	379200	-75400
Aug. 31.....	1381.40	89800	-1000	1259.58	12100	0	1033.77	297200	-82000
Sept. 30.....	1377.82	82600	-7200	1260.38	12400	+300	1036.36	319000	+21800
WTR YR 1977	-	-	-2800	-	-	+300	-	-	+13200
	03499500 FORT LOUDOUN LAKE‡			03518200 CHILHOWEE LAKE			03532500 NORRIS LAKE		
Sept. 30.....	812.12	177000	-	870.89	22100	-	984.06	532700	-
Oct. 31.....	812.70	181000	+4000	871.08	22300	+200	987.69	572600	+39900
Nov. 30.....	809.23	157000	-24000	873.92	24800	+2500	984.73	539900	-32700
Dec. 31.....	808.20	150000	-7000	873.40	24300	-500	985.11	544000	+4100
CAL YR 1976	-	-	0	-	-	-200	-	-	+50400
Jan. 31.....	807.39	145000	-5000	872.56	23600	-700	978.65	476900	-67100
Feb. 28.....	807.72	147000	+2000	873.62	24500	+900	976.21	453200	-23700
Mar. 31.....	809.49	159000	+12000	873.80	24600	+100	992.03	623200	+170000
Apr. 30.....	812.22	178000	+19000	873.46	24400	-200	1016.78	972800	+349600
May 31.....	812.12	177000	-1000	873.26	24200	-200	1011.13	883200	-89600
June 30.....	812.16	177000	0	873.05	24000	-200	1005.83	804600	-78600
July 31.....	812.21	177000	0	873.37	24300	+300	998.08	698700	-105900
Aug. 31.....	811.92	175000	-2000	872.29	23300	-1000	991.46	616400	-82300
Sept. 30.....	812.17	177000	+2000	873.27	24200	+900	986.08	554700	-61700
WTR YR 1977	-	-	0	-	-	+2100	-	-	+22000

‡ Contents based on backwater profile.

RESERVOIRS IN TENNESSEE RIVER BASIN--CONTINUED

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03535900 MELTON HILL LAKE			03543000 WATTS BAR LAKE‡			03564000 LAKE OCOEE		
Sept. 30.....	793.80	57100	-	741.08	511000	-	834.5	40500	-
Oct. 31.....	793.93	57400	+300	738.19	459000	-52000	834.7	40700	+200
Nov. 30.....	792.03	52400	-5000	737.41	447000	-12000	832.6	38700	-2000
Dec. 31.....	794.53	59100	+6700	735.28	412000	-35000	828.6	35100	-3600
CAL YR 1976	-	-	+300	-	-	-11000	-	-	+800
Jan. 31.....	791.20	50300	-8800	735.35	411000	-1000	828.1	34700	-400
Feb. 28.....	793.98	57600	+7300	736.08	420000	+9000	828.3	34900	+200
Mar. 31.....	794.05	57800	+200	737.75	452000	+32000	835.7	41700	+6800
Apr. 30.....	793.40	56000	-1800	741.20	513000	+61000	834.2	40200	-1500
May 31.....	793.10	55200	-800	741.02	510000	-3000	835.2	41200	+1000
June 30.....	793.60	56500	+1300	741.02	510000	0	835.6	41600	+400
July 31.....	793.15	55300	-1200	740.07	491000	-19000	835.1	41100	-500
Aug. 31.....	794.10	57900	+2600	740.74	504000	+13000	835.3	41300	+200
Sept. 30.....	793.33	55800	-2100	740.80	506000	+2000	835.3	41300	0
WTR YR 1977	-	-	-1300	-	-	-5000	-	-	+800
	03566500 CHICKAMAUGA LAKE‡			03570520 NICKAJACK LAKE‡			03579000 WOODS RESERVOIR		
Sept. 30.....	681.15	292000	-	632.48	116000	-	959.40	39100	-
Oct. 31.....	679.74	268000	-24000	633.48	122000	+6000	958.09	36600	-2500
Nov. 30.....	677.70	239000	-29000	633.71	123000	+1000	958.27	36900	+300
Dec. 31.....	676.32	223000	-16000	633.82	125000	+2000	959.19	36800	-100
CAL YR 1976	-	-	+15000	-	-	-1000	-	-	+400
Jan. 31.....	675.22	205000	-18000	633.80	122000	-3000	957.06	34700	-2100
Feb. 28.....	676.12	213000	+8000	633.48	121000	-1000	958.36	37100	+2400
Mar. 31.....	677.20	232000	+19000	633.68	126000	+5000	959.58	39400	+2300
Apr. 30.....	682.51	318000	+86000	633.34	121000	-5000	959.58	39400	0
May 31.....	682.41	317000	-1000	633.70	123000	+2000	959.58	39400	0
June 30.....	682.00	308000	-9000	633.42	123000	0	959.57	39400	0
July 31.....	681.46	301000	-7000	632.96	119000	-4000	959.52	39300	-100
Aug. 31.....	680.80	285000	-16000	633.31	121000	+2000	959.50	39300	0
Sept. 30.....	681.25	294000	+9000	632.35	117000	-4000	959.48	39200	-100
WTR YR 1977	-	-	+2000	-	-	+1000	-	-	+100
	03580740 TIMS FORD LAKE			03593000 PICKWICK LAKE‡			03596460 NORMANDY LAKE		
Sept. 30.....	884.73	250100	-	411.40	412000	-	872.92	55700	-
Oct. 31.....	883.71	245000	-5100	410.40	395000	-1700	873.32	56400	+700
Nov. 30.....	877.55	215600	-29400	409.63	384000	-1100	864.44	43500	-12900
Dec. 31.....	872.69	194500	-21100	408.92	369000	-1500	859.15	36300	-7200
Dec. 31.....								a33800	
CAL YR 1976	-	-	-8900	-	-	-5000	-	-	+36300
Jan. 31.....	872.83	195100	+600	408.76	367000	-200	861.47	36600	+2800
Feb. 28.....	875.34	205800	+10700	409.84	390000	+2300	864.96	41000	+4400
Mar. 31.....	880.85	230900	+25100	409.80	390000	0	866.74	43400	+2400
Apr. 30.....	885.58	254500	+23600	413.94	465000	+7500	871.71	50800	+7400
May 31.....	885.15	252300	-2200	414.20	471000	+600	873.81	54100	+3300
June 30.....	885.22	252600	+300	413.70	460000	-1100	873.02	52800	-1300
July 31.....	883.95	246200	-6400	412.20	428000	-3200	871.06	49800	-3000
Aug. 31.....	883.27	242800	-3400	411.60	416000	-1200	869.47	47400	-2400
Sept. 30.....	885.97	256500	+13700	411.34	411000	-500	869.48	47400	0
WTR YR 1977	-	-	+6400	-	-	-100	-	-	a-5300

‡ Contents based on backwater profile.
a Based on Jan. 1, 1977, capacity table.

RESERVOIRS IN TENNESSEE RIVER BASIN--CONTINUED

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03609000 KENTUCKY LAKE‡		
Sept. 30.....	355.27	1153000	-
Oct. 31.....	354.84	1149000	-4000
Nov. 30.....	354.20	1091000	-58000
Dec. 31.....	354.03	1092000	+1000
CAL YR 1976	-	-	-46000
Jan. 31.....	354.08	1078000	-14000
Feb. 28.....	355.51	1201000	+123000
Mar. 31.....	354.32	1122000	-79000
Apr. 30.....	359.31	1461000	+339000
May 31.....	358.93	1434000	-27000
June 30.....	358.10	1357000	-77000
July 31.....	357.03	1279000	-78000
Aug. 31.....	356.22	1213000	-66000
Sept. 30.....	357.09	1288000	+75000
WTR YR 1977	-	-	+135000

‡ Contents based on backwater profile.

07024300 BEAVER CREEK AT HUNTINGDON, TN

LOCATION.--Lat 35°59'56", long 88°26'01", Carroll County, Hydrologic Unit 08010203, on left bank on downstream end of pier of bridge on U.S. Highway 70, 0.3 mi (0.5 km) southwest of Huntingdon, 0.6 mi (1.0 km) downstream from Brier Creek, and 5.6 mi (9.0 km) upstream from mouth.

DRAINAGE AREA.--55.5 mi^2 (143.7 km^2).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1946, 1948, 1952-54, 1958-61 and annual maximum, water years 1954-62. October 1962 to current year.

REVISED RECORDS.--WSP 1920: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 364.20 ft (111.008 m) above sea level (Tennessee State Highway Department bench mark). Dec. 21, 1945, to Oct. 3, 1962, nonrecording gage at site 30 ft (9.1 m) downstream at same datum; Jan. 6, 1954, to Oct. 3, 1962, crest-stage gage at same site at datum 1.17 ft (0.356 m) higher.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--15 years, 109 ft^3/s (3.087 m^3/s), 26.67 in/yr (677 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft^3/s (236 m^3/s) Sept. 9, 1970, gage height, 13.96 ft (4.255 m) from rating curve extended above 3,600 ft^3/s (102 m^3/s) on basis of contracted opening measurement of peak flow; minimum, 19 ft^3/s (0.54 m^3/s) May 17, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,200 ft^3/s (90.6 m^3/s) at 1345 hours Mar. 4, gage height, 11.74 ft (3.578 m); minimum, 26 ft^3/s (0.74 m^3/s) Sept. 2, 3, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	52	47	35	39	78	49	52	33	33	134	27
2	31	46	49	34	40	64	153	47	32	33	39	27
3	32	45	44	36	45	266	370	78	31	32	32	27
4	31	43	44	41	52	2610	610	250	31	32	31	29
5	30	42	43	55	55	1270	731	262	30	31	30	37
6	50	42	44	55	45	240	206	82	30	31	28	43
7	35	42	56	56	41	90	91	58	30	31	28	32
8	33	41	47	51	41	71	71	48	32	31	33	30
9	33	43	43	53	43	64	60	43	31	85	28	30
10	32	43	44	55	47	59	55	39	30	48	28	28
11	31	42	51	54	51	68	50	38	30	86	29	27
12	32	43	56	54	218	940	47	37	29	48	28	27
13	32	43	49	48	120	1130	45	36	29	37	29	41
14	31	45	45	201	79	238	44	35	43	35	71	76
15	32	48	44	196	66	87	42	34	40	35	81	78
16	32	45	44	92	55	66	40	33	36	35	60	87
17	32	43	43	73	53	59	38	33	37	34	70	38
18	32	43	42	70	54	58	38	32	36	34	44	34
19	34	43	42	67	54	52	39	32	37	33	34	40
20	69	44	42	67	51	52	38	32	34	33	32	37
21	43	42	38	71	49	51	37	31	33	33	29	32
22	37	41	36	69	51	60	178	32	35	52	38	31
23	37	41	38	56	112	50	429	32	51	84	68	30
24	181	42	38	43	344	48	693	32	36	34	32	169
25	282	42	45	45	127	46	301	33	46	35	30	286
26	111	92	46	52	109	45	93	32	67	35	29	269
27	53	93	43	66	300	48	66	32	44	33	28	298
28	45	56	45	64	115	70	56	32	35	30	27	247
29	44	49	42	48	---	61	63	31	33	52	32	95
30	105	44	40	43	---	52	58	49	34	33	39	160
31	71	---	38	39	---	45	---	37	---	63	29	---
TOTAL	1705	1420	1368	1989	2456	8138	4791	1674	1075	1281	1270	2412
MEAN	55.0	47.3	44.1	64.2	87.7	263	160	54.0	35.8	41.3	41.0	80.4
MAX	282	93	56	201	344	2610	731	262	67	86	134	298
MIN	30	41	36	34	39	45	37	31	29	30	27	27
CFSM	.99	.85	.80	1.16	1.58	4.74	2.88	.97	.65	.74	.74	1.45
IN.	1.14	.95	.92	1.33	1.65	5.45	3.21	1.12	.72	.86	.85	1.62

CAL YR 1976 TOTAL 34898 MEAN 95.3 MAX 1910 MIN 30 CFSM 1.72 IN 23.39
WTR YR 1977 TOTAL 29579 MEAN 81.0 MAX 2610 MIN 27 CFSM 1.46 IN 19.83

07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD, TN

LOCATION.--Lat 36°07'05", long 88°48'39", Weakley County, Hydrologic Unit 08010203, on left bank 75 ft (23 m) downstream from bridge on U.S. Highway 45E, 1.1 mi (1.8 km) downstream from Mosley Branch, 2.5 mi (4.0 km) south of Greenfield, and 9.7 mi (15.6 km) upstream from confluence with Middle Fork.

DRAINAGE AREA.--383 mi^2 (992 km^2).

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 1311: 1936(M). WSP 1920: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 300.36 ft (91.550 m) above mean sea level. Prior to June 22, 1939, recording gage at site 75 ft (23 m) upstream at same datum.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--48 years, 573 ft^3/s (16.23 m^3/s), 20.32 in/yr (516 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft^3/s (725 m^3/s) Jan. 22, 1937, gage height, 17.82 ft (5.432 m), from floodmarks, from rating curve extended above 14,000 ft^3/s (396 m^3/s); minimum, 61 ft^3/s (1.73 m^3/s) Aug. 21, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,030 ft^3/s (114 m^3/s) at 0200 hours Mar. 7, gage height, 15.61 ft (4.758 m); minimum, 110 ft^3/s (3.12 m^3/s) July 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	345	253	168	211	828	245	268	158	132	210	120
2	173	320	241	164	212	699	504	245	156	126	220	116
3	162	285	232	166	232	942	734	386	153	120	187	115
4	153	254	227	174	254	2220	1040	400	148	117	156	113
5	149	232	220	197	278	2430	1150	458	138	115	139	120
6	155	221	216	221	260	3340	1180	571	124	113	129	124
7	173	215	230	235	236	3890	1270	557	120	112	123	125
8	169	208	232	235	218	3080	1240	440	117	110	123	124
9	163	206	225	235	220	2220	786	314	117	210	125	121
10	157	206	221	227	229	1180	461	243	115	561	123	117
11	153	205	229	217	239	589	347	230	115	530	119	114
12	151	206	244	195	578	1040	292	227	115	692	117	113
13	150	208	248	191	557	1090	261	223	115	468	117	133
14	149	212	243	424	594	1130	239	213	117	353	290	176
15	148	222	236	533	540	1310	226	205	136	251	231	379
16	148	222	226	591	437	1550	226	197	147	200	379	305
17	147	220	217	503	353	1370	226	190	145	160	420	251
18	147	218	210	365	315	797	226	186	145	143	321	220
19	149	216	206	269	285	453	227	180	139	133	255	209
20	189	211	206	226	266	360	226	176	134	128	202	171
21	225	206	198	212	254	318	226	170	128	125	166	146
22	221	203	191	211	248	312	227	166	124	124	146	132
23	208	196	188	206	476	291	413	163	133	141	157	123
24	380	189	185	211	938	278	669	158	162	152	159	449
25	788	187	188	223	757	269	776	155	171	159	146	582
26	651	347	204	244	860	249	878	153	178	222	141	682
27	638	357	208	305	1020	243	844	152	195	191	134	989
28	533	359	210	341	840	277	578	151	182	163	128	988
29	396	341	205	268	---	294	388	149	158	152	124	922
30	405	286	198	251	---	294	308	150	142	157	127	800
31	362	---	190	225	---	276	---	156	---	151	130	---
TOTAL	7978	7303	6727	8233	11907	33619	16413	7632	4227	6511	5544	9079
MEAN	257	243	217	266	425	1084	547	246	141	210	179	303
MAX	788	359	253	591	1020	3890	1270	571	195	692	420	989
MIN	147	187	185	164	211	243	226	149	115	110	117	113
CFSM	.67	.63	.57	.70	1.11	2.83	1.43	.64	.37	.55	.47	.79
IN.	.77	.71	.65	.80	1.16	3.27	1.59	.74	.41	.63	.54	.88

CAL YR 1976 TOTAL 196599 MEAN 537 MAX 4540 MIN 127 CFSM 1.40 IN 19.10
WTR YR 1977 TOTAL 125173 MEAN 343 MAX 3890 MIN 110 CFSM .90 IN 12.16

07026000 OBION RIVER AT OBION, TN
(National stream-quality accounting network station)

LOCATION.--Lat 36°15'04", long 89°11'33", Obion County, Hydrologic Unit 08010202, near left bank on downstream end of pier of bridge on U.S. Highway 51, 0.5 mi (0.8 km) upstream from Richland Creek, 0.6 mi (1.0 km) south of Obion, and 14.5 mi (23.3 km) downstream from North Fork. Water quality sampling site at railroad bridge 250 ft (76 m) upstream.

DRAINAGE AREA.--1,852 mi^2 (4,797 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to September 1958, October 1966 to current year. Gage height and discharge records at this site from 1964 to 1975 are in reports of Corps of Engineers.

REVISED RECORD.--WSP 1211: 1930, 1943. WSP: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.48 ft (75.127 m) above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1932, nonrecording gage at present site at datum 5.00 ft (1.524 m) higher; Oct. 1, 1932, to Aug. 2, 1939, nonrecording gage, and Aug. 3, 1939, to Sept. 1958, water-stage recorder at present site at datum 15.00 ft (4.572 m) higher.

REMARKS.--Records fair.

COOPERATION.--Nineteen discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--40 years, (water years 1930-58, 1967-77), 2,649 ft^3/s (75.02 m^3/s), 19.42 in/yr (493 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 99,500 ft^3/s (2,820 m^3/s) Jan. 24, 1937, gage height 40.4 ft (12.31 m), present datum; minimum, under conditions of no backwater, 230 ft^3/s (6.51 m^3/s) Oct. 7-9. 1943; minimum daily discharge, 15 ft^3/s (0.42 m^3/s), backwater from Mississippi River, Feb. 4, 1937; reverse flow of 57 ft^3/s (1.61 m^3/s) measured by current meter on that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,300 ft^3/s (377 m^3/s) Mar. 5, gage height, 28.77 ft (8.769 m); minimum, 467 ft^3/s (13.23 m^3/s) July 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	770	1130	947	753	788	2110	855	1590	703	732	1650	626
2	707	976	914	745	757	1690	2110	1190	646	707	1080	566
3	703	887	905	711	823	2890	9550	2920	613	562	779	558
4	654	823	873	715	1050	12200	10100	6690	595	517	678	558
5	654	788	864	745	1260	13100	9050	7590	570	497	621	570
6	699	753	855	836	1090	13000	6020	3380	553	490	574	690
7	732	736	887	868	910	9300	3460	2290	533	482	549	634
8	711	728	933	868	819	6700	2410	1460	529	474	541	574
9	703	724	891	859	788	5100	2100	1150	529	2320	1180	549
10	682	732	850	896	819	3900	1510	957	517	2310	796	558
11	682	736	882	896	864	3250	1200	855	513	1800	600	533
12	678	749	967	924	1650	6960	1060	796	509	2100	541	513
13	658	745	971	971	2690	9150	976	753	505	1190	900	513
14	678	762	929	1030	1990	6450	957	711	525	900	4260	3390
15	658	801	882	1990	1700	3890	929	694	608	732	5030	1260
16	646	850	877	1650	1470	2820	887	670	578	617	1460	1400
17	666	836	868	1420	1300	2610	935	646	566	549	4760	910
18	658	819	850	1220	1200	2430	910	630	574	509	2430	715
19	662	814	827	1080	1160	1860	885	626	566	494	1150	836
20	732	814	814	970	1110	1380	891	638	583	501	850	919
21	947	775	819	900	1070	1190	845	613	549	562	707	715
22	887	757	788	860	1040	1160	850	650	962	497	638	634
23	814	757	766	845	1060	1110	3560	2240	967	1160	604	583
24	2070	788	766	835	3930	986	4460	1600	801	900	654	2190
25	2850	796	766	845	3450	929	3750	1770	682	736	613	6690
26	2670	1110	810	875	2110	882	2290	1460	2390	877	583	8660
27	1540	2160	832	1020	2980	864	1880	1010	1780	707	566	8610
28	1260	1500	832	1310	3200	1030	1590	762	943	658	545	8090
29	1070	1190	827	1210	---	1350	1550	690	694	801	745	3990
30	1090	1050	805	957	---	1120	1840	823	613	2160	1510	2780
31	1360	---	757	855	---	962	---	775	---	2050	855	---
TOTAL	30291	27086	26554	30659	43078	122373	79410	48629	21696	29591	38449	59814
MEAN	977	903	857	989	1539	3948	2647	1569	723	955	1240	1994
MAX	2850	2160	971	1990	3930	13100	10100	7590	2390	2320	5030	8660
MIN	646	724	757	711	757	864	845	613	505	474	541	513
CFSM	.53	.49	.46	.53	.83	2.13	1.43	.85	.39	.52	.67	1.08
IN.	.61	.54	.53	.62	.87	2.46	1.60	.98	.44	.59	.77	1.20

CAL YR 1976 TOTAL 982899 MEAN 2686 MAX 25600 MIN 621 CFSM 1.45 IN 19.74
WTR YR 1977 TOTAL 557630 MEAN 1528 MAX 13100 MIN 474 CFSM .83 IN 11.20

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1975 to current year.
WATER TEMPERATURE: June 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since June, 1975.

REMARKS.--Interruptions in the water temperature and specific conductivity records were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 488 micromhos Dec. 14,1976; minimum, 35 micromhos July 21, 22, 1975.
WATER TEMPERATURES: Maximum, 31.5°C Aug. 27, 1975, July 15, 16, 17, 1977; minimum, 0.5°C Feb. 2, 7, 8, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--A water temperature of 90°F (32°C) was observed Aug. 21, 1952; a water temperature of 37°F (3°C) was observed Mar. 25, 1955, and Feb. 11, 1958.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 488 micromhos Dec. 14; minimum, 44 micromhos Nov. 27.
WATER TEMPERATURE: Maximum, 31.5°C July 15, 16, 17; minimum, 0.5°C Feb. 2, 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT												
04...	1500	654	77	--	22.0	--	--	--	--	--	--	--
NOV												
03...	1130	784	82	6.6	10.3	25	--	B6000	B10000	23	0	5.9
18...	1500	686	174	--	10.0	--	--	--	--	--	--	--
DEC												
21...	1200	732	75	7.0	3.0	7	--	880	B150	21	0	5.1
JAN												
26...	1015	800	85	6.5	3.0	15	--	B13	--	23	0	5.4
FEB												
22...	1100	810	90	6.6	5.0	20	--	84	127	26	1	6.4
MAR												
22...	1000	1317	80	6.1	11.5	35	--	128	393	27	1	6.5
APR												
19...	1130	868	90	6.1	20.5	15	--	500	857	27	0	6.4
MAY												
26...	1000	1500	75	6.4	22.0	200	--	B15200	B20000	20	1	5.7
26...	1100	1780	75	--	22.0	--	--	--	--	--	--	--
JUN												
23...	1000	1000	90	6.2	25.0	200	--	30000	81000	18	0	3.0
JUL												
12...	1000	2500	49	5.8	26.0	350	5.2	<1	B39000	11	0	2.9
AUG												
26...	1100	500	81	5.9	26.0	20	7.4	B1200	B200	22	0	5.7
SEP												
20...	1000	860	80	5.9	22.0	85	7.0	8400	20000	21	0	5.4

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
03...	2.1	6.0	33	.5	2.4	29	0	24	12	7.2	5.5	.1
18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
21...	1.9	5.7	36	.5	1.4	27	0	22	4.3	3.7	4.5	.1
JAN												
26...	2.2	6.7	37	.6	1.6	30	0	25	15	4.8	6.0	.1
FEB												
22...	2.4	6.3	33	.5	1.6	30	0	25	12	5.9	4.6	.0
MAR												
22...	2.6	6.6	33	.6	2.2	32	0	26	41	7.4	4.7	.0
APR												
19...	2.7	6.8	34	.6	1.7	36	0	30	46	4.7	4.4	.0
MAY												
26...	1.4	5.8	36	.6	2.2	23	0	19	15	7.2	4.5	.1
26...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	2.6	7.1	42	.7	2.5	32	0	26	32	6.2	5.3	.2
JUL												
12...	1.0	5.0	44	.6	2.0	14	0	11	36	6.7	3.3	.1
AUG												
26...	2.0	6.5	36	.6	1.8	30	0	25	60	4.5	4.9	.0
SEP												
20...	1.9	5.7	32	.5	3.8	27	0	22	54	4.6	5.2	.1

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	NITRITE PLUS NITRATE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL KJEL. NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
03...	12	51	56	.07	108	.27	--	--	.62	--	.89	3.9
18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
21...	12	50	48	.07	98.8	.34	--	--	.30	--	.64	2.8
JAN												
26...	12	54	54	.07	117	--	--	--	--	--	--	--
FEB												
22...	11	53	53	.07	116	.33	--	--	.34	--	.67	3.0
MAR												
22...	11	68	57	.09	242	.35	--	--	.50	--	.85	3.8
APR												
19...	11	63	55	.09	148	.40	--	--	.43	--	.83	3.7
MAY												
26...	8.1	54	46	.07	219	.96	--	--	2.0	--	3.0	13
26...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	8.2	63	51	.09	170	.90	--	--	8.0	--	8.9	39
JUL												
12...	7.1	55	35	.07	371	.59	--	--	2.2	--	2.8	12
AUG												
26...	12	62	52	.08	83.7	.27	--	--	.42	--	.69	3.1
SEP												
20...	11	59	51	.08	137	.46	--	--	.90	--	1.4	6.0

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	SUS-PENDED BARIUM (BA) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
03...	.14	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
21...	.09	--	2	0	2	--	--	--	0	0	0	10
JAN												
26...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	.12	--	--	--	--	--	--	--	--	--	--	--
MAR												
22...	.12	--	2	2	0	--	--	--	--	--	0	--
APR												
19...	.13	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	.92	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	1.6	--	3	0	3	--	--	--	0	0	0	40
JUL												
12...	1.2	--	--	--	--	--	--	--	--	--	--	--
AUG												
26...	.19	--	--	--	--	--	--	--	--	--	--	--
SEP												
20...	.35	--	0	0	0	--	--	--	0	0	0	<10

DATE	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)
OCT												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
03...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
21...	2	8	0	0	0	3	0	3	1100	20	6	4
JAN												
26...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
22...	--	0	--	--	0	--	--	2	--	240	--	--
APR												
19...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
26...	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	40	0	10	10	0	53	43	10	28000	30	10	5
JUL												
12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
26...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
20...	<7	3	0	0	0	11	8	3	10000	260	10	8

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	SUS-PENDED SELE-NIUM (SE) (UG/L)
NOV 03...	--	--	--	--	--	--	--	--
DEC 21...	2	230	200	.0	.0	.0	0	0
JAN 26...	--	--	--	--	--	--	--	--
MAR 22...	4	140	140	.1	.1	.0	0	0
APR 19...	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--
JUN 23...	5	3700	250	.1	.1	.0	0	0
JUL 12...	--	--	--	--	--	--	--	--
AUG 26...	--	--	--	--	--	--	--	--
SEP 20...	2	530	40	.5	.0	.5	0	0

DATE	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	SUS-PENDED SILVER (AG) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	DIS-SOL-VED ORGANIC CARBON (C) (MG/L)
NOV 03...	--	--	--	--	--	--	--	--	--
DEC 21...	0	--	--	--	20	20	4	2.6	--
JAN 26...	--	--	--	--	--	--	--	--	--
MAR 22...	0	--	--	--	--	--	10	5.6	--
APR 19...	--	--	--	--	--	--	--	--	--
MAY 26...	--	--	--	--	--	--	--	--	--
JUN 23...	0	--	--	--	250	240	10	--	2.6
JUL 12...	--	--	--	--	--	--	--	--	--
AUG 26...	--	--	--	--	--	--	--	--	--
SEP 20...	0	--	--	--	30	20	10	14	--

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	SUS-PENDED ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-SPECT-METRIC (MG/M2)	BIOMASS CHLORO-PHYLL RATIO PERI-PHYTON (UNITS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
NOV								
03...	--	40000	2.54	1.68	7359	155	328	37
DEC								
21...	--	--	--	--	--	50	99	74
JAN								
26...	--	3800	--	--	--	--	--	--
MAR								
22...	--	--	--	--	--	108	384	96
APR								
19...	--	--	--	--	--	119	279	95
MAY								
26...	--	2700	--	--	--	2649	10700	99
JUN								
23...	3.1	5900	--	--	--	2762	7460	99
JUL								
12...	--	--	--	--	--	3585	24200	99
AUG								
26...	--	2600	--	--	--	92	124	89
SEP								
20...	--	--	--	--	--	303	704	92

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	---	---	---	73	70	71	228	191	210	77	72	75
2	---	---	---	76	72	74	244	228	236	78	73	75
3	---	---	---	83	77	81	241	220	231	85	76	80
4	77	71	71	83	81	82	221	203	211	87	83	86
5	76	71	73	83	81	82	252	219	228	89	80	85
6	89	73	80	83	81	82	273	255	266	79	75	77
7	83	75	79	83	78	81	275	273	275	78	74	76
8	78	74	77	77	74	75	287	272	277	78	75	77
9	79	76	77	81	74	78	311	289	297	79	73	77
10	80	72	76	83	80	82	358	313	335	80	70	74
11	71	66	68	82	80	81	366	360	363	92	73	81
12	73	65	69	85	79	82	380	360	366	89	76	82
13	79	72	75	82	80	81	482	381	416	80	76	78
14	77	72	74	86	76	79	488	431	462	103	75	80
15	76	72	74	76	72	74	428	381	399	164	95	118
16	73	71	72	76	73	75	382	95	274	187	80	125
17	70	67	69	79	76	78	266	132	182	80	73	77
18	67	65	66	81	77	79	267	155	218	85	81	83
19	70	64	67	80	77	79	193	114	172	87	85	86
20	87	68	74	78	76	77	111	71	75	86	84	85
21	86	69	76	77	72	75	75	71	75	85	82	83
22	75	69	73	74	70	71	78	75	77	84	81	83
23	77	74	76	74	69	72	81	75	79	83	82	83
24	106	73	86	78	74	77	80	77	79	82	79	80
25	78	60	67	78	75	76	77	72	74	85	80	82
26	63	60	62	111	70	80	72	71	71	85	83	84
27	67	63	66	107	44	67	71	70	71	90	84	87
28	71	67	69	106	80	92	75	70	73	91	85	88
29	73	70	72	146	108	128	76	74	75	---	---	---
30	94	72	77	190	147	167	76	74	75	86	83	85
31	90	71	79	---	---	---	77	74	75	84	80	82
MONTH	106	60	73	190	44	83	488	70	204	187	70	84

07026000 OBION RIVER AT OBION, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C). WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	86	81	84	81	79	80	83	77	81	85	82	84
2	86	84	85	82	80	81	89	57	78	86	85	85
3	90	81	87	101	79	83	63	54	56	108	83	88
4	95	88	92	72	64	66	62	56	60	93	68	81
5	95	84	89	128	59	64	64	62	63	79	69	75
6	84	78	80	60	57	59	64	62	63	82	79	80
7	79	78	78	62	58	61	67	64	65	86	80	83
8	83	79	81	63	59	60	68	66	67	86	80	84
9	---	---	---	59	58	59	71	67	69	89	86	88
10	85	83	84	61	58	60	77	72	75	93	89	91
11	85	82	84	67	61	64	80	77	79	95	93	95
12	109	82	91	80	58	68	82	80	81	95	93	94
13	120	92	97	60	57	59	86	83	85	96	93	95
14	---	---	---	61	56	58	89	86	87	96	92	94
15	237	209	223	64	60	63	90	87	88	93	88	90
16	264	236	249	64	63	63	91	87	89	87	86	86
17	276	112	235	65	62	63	91	85	89	88	86	88
18	280	190	238	81	64	68	87	85	86	90	88	89
19	245	88	143	79	68	71	90	87	90	93	88	91
20	89	87	88	73	71	72	104	87	96	92	89	90
21	86	85	86	74	73	73	92	89	90	93	89	91
22	91	87	89	82	73	76	93	91	92	138	84	91
23	90	85	88	74	72	73	125	77	89	106	72	86
24	110	85	92	74	72	73	75	66	69	79	71	75
25	87	84	85	75	73	74	78	67	73	100	74	83
26	85	83	84	76	73	74	73	71	72	100	75	82
27	90	75	82	75	72	74	74	72	73	91	82	87
28	79	74	76	95	74	79	78	73	75	94	91	93
29	---	---	---	97	76	84	94	78	84	94	91	93
30	---	---	---	77	75	77	109	77	83	99	79	88
31	---	---	---	78	77	77	---	---	---	92	87	89
MONTH	280	74	111	128	56	70	125	54	78	138	68	87

		JUNE			JULY			AUGUST			SEPTEMBER	
1	90	88	89	104	77	88	128	84	111	78	70	76
2	95	89	94	81	76	79	179	99	133	85	78	82
3	98	92	95	84	81	83	181	93	132	85	81	82
4	96	93	94	83	80	81	208	114	149	81	78	80
5	95	90	93	81	79	80	185	121	150	77	70	75
6	90	87	88	84	79	82	142	104	128	83	67	73
7	94	86	91	87	82	85	145	84	108	76	70	74
8	97	93	95	86	84	85	87	75	81	79	75	78
9	96	94	95	113	59	76	314	73	161	80	78	79
10	97	93	95	65	53	59	169	150	158	86	79	82
11	97	94	95	58	48	53	174	82	130	84	75	79
12	95	88	93	53	46	50	93	84	89	74	71	73
13	88	87	87	62	50	58	109	72	86	77	72	75
14	94	88	91	68	62	66	81	56	70	94	60	72
15	107	90	96	75	67	72	64	55	59	84	68	76
16	97	92	93	82	75	79	68	61	66	85	66	75
17	93	91	92	84	81	83	74	60	64	70	66	67
18	97	93	94	82	80	81	76	67	71	75	69	72
19	96	87	91	87	82	84	106	77	90	83	68	73
20	112	85	97	88	84	86	133	107	120	83	76	80
21	93	84	89	96	84	88	147	134	141	81	76	79
22	139	75	88	90	86	87	151	74	107	83	81	81
23	128	79	92	101	59	76	86	78	81	85	82	84
24	99	71	81	66	60	63	84	75	79	108	80	85
25	85	79	81	73	66	68	82	75	78	78	57	66
26	99	56	70	87	70	74	86	79	82	59	53	55
27	63	56	58	75	70	73	84	79	82	71	52	60
28	73	64	68	78	74	77	82	79	81	64	62	63
29	80	73	77	91	71	81	105	76	80	79	63	66
30	86	80	83	100	59	74	99	53	68	78	70	72
31	---	---	---	81	62	69	70	59	65	---	---	---
MONTH	139	56	88	113	46	75	314	53	100	108	52	74
YEAR	488	44	94									

07026000 OBION RIVER AT OBION, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	11.0	8.5	9.5	4.0	3.0	3.5	---	---	---
2	---	---	---	11.5	8.5	9.5	4.5	3.5	4.0	---	---	---
3	---	---	---	10.5	9.5	10.0	4.5	3.5	4.0	---	---	---
4	22.5	21.5	21.5	10.0	8.5	9.0	5.0	4.0	4.5	3.5	2.5	3.0
5	22.0	20.0	21.0	8.5	6.5	7.5	5.5	4.5	5.0	4.0	3.5	4.0
6	20.5	19.0	19.5	9.0	6.5	8.0	6.0	5.5	5.5	4.0	3.5	3.5
7	19.0	16.5	17.5	9.0	8.0	8.5	6.0	4.5	5.5	3.5	3.0	3.5
8	17.0	15.0	15.5	8.5	6.5	7.0	4.5	4.0	4.0	3.5	1.5	2.5
9	16.5	14.5	15.5	9.5	6.5	7.5	4.0	3.5	4.0	---	---	---
10	17.0	15.0	16.0	10.0	8.5	9.0	5.0	4.0	4.0	---	---	---
11	17.5	15.0	16.5	10.0	6.5	7.5	5.5	5.0	5.5	---	---	---
12	18.5	15.5	17.0	6.5	5.0	6.0	6.0	5.5	6.0	---	---	---
13	19.0	17.5	18.5	6.0	4.5	5.5	6.0	5.5	5.5	---	---	---
14	19.0	16.5	18.0	6.0	4.5	5.0	5.5	4.5	5.0	---	---	---
15	19.0	16.5	18.0	6.0	5.0	5.5	6.0	5.0	5.5	---	---	---
16	19.0	15.0	17.0	7.0	4.5	5.5	6.0	5.5	5.5	---	---	---
17	15.0	13.0	14.0	7.5	5.0	6.5	6.5	5.0	5.5	---	---	---
18	14.0	12.0	13.0	9.0	6.0	7.5	7.5	6.0	6.5	---	---	---
19	14.0	13.0	13.5	9.0	8.0	8.5	9.0	7.0	8.0	---	---	---
20	13.5	11.5	12.5	9.0	8.5	9.0	9.5	5.5	7.5	---	---	---
21	12.5	10.0	11.5	9.0	7.5	8.0	5.0	2.5	3.0	---	---	---
22	13.0	10.5	12.0	7.5	6.0	6.5	3.0	1.5	2.0	---	---	---
23	13.0	12.0	12.0	6.5	5.0	5.5	3.0	1.0	2.0	---	---	---
24	14.0	12.5	13.0	7.0	5.0	6.0	3.5	1.5	2.5	2.5	1.5	2.0
25	14.0	13.5	14.0	9.0	6.0	7.0	4.5	3.0	3.5	3.5	2.0	3.0
26	13.5	13.0	13.5	10.5	9.0	9.5	5.0	3.0	4.0	3.5	2.0	3.0
27	12.5	11.0	11.5	10.5	9.5	10.0	6.0	3.5	4.5	4.5	3.0	4.0
28	11.0	9.5	10.0	9.5	6.5	8.0	6.0	5.0	5.5	---	---	---
29	10.0	8.5	9.5	6.5	4.5	5.0	5.0	3.0	3.5	---	---	---
30	10.0	9.5	9.5	4.5	3.0	3.5	3.5	2.5	3.0	---	---	---
31	10.0	9.0	9.5	---	---	---	---	---	---	---	---	---
MONTH	22.5	8.5	14.5	11.5	3.0	7.5	9.5	1.0	4.5			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	7.5	5.5	6.5	17.0	14.5	15.5	21.0	18.0	19.5
2	4.0	0.5	2.0	8.0	6.0	7.0	18.0	15.0	16.0	22.0	19.0	20.5
3	4.0	3.5	4.0	8.0	7.0	7.5	17.5	14.0	15.5	22.0	18.5	19.5
4	5.5	3.0	4.0	8.0	7.0	7.0	14.0	13.0	13.5	21.0	19.0	19.5
5	5.5	2.5	3.5	8.0	7.5	8.0	13.0	11.5	12.5	23.0	20.5	21.5
6	3.0	1.0	2.5	8.0	7.5	8.0	11.5	10.5	11.0	24.0	22.0	23.0
7	2.5	0.5	1.5	8.5	8.0	8.0	14.5	11.5	13.0	24.5	22.0	23.5
8	3.0	0.5	2.0	9.5	8.5	8.5	17.0	14.0	15.5	25.5	22.0	24.0
9	5.0	2.0	3.5	9.5	9.5	9.5	18.0	15.0	16.5	24.5	21.5	23.0
10	6.5	3.5	5.0	10.5	10.0	10.0	19.5	16.0	17.5	22.0	19.0	20.5
11	7.0	5.0	6.0	12.5	10.5	11.5	20.5	17.5	19.0	21.0	18.0	19.5
12	7.0	5.0	6.5	12.5	11.5	12.0	21.5	18.5	20.0	22.0	18.0	20.0
13	5.0	4.0	4.5	12.5	11.5	12.0	22.0	19.0	20.5	23.0	19.0	21.0
14	5.0	4.0	4.5	13.0	11.0	12.0	22.0	19.5	21.0	23.5	20.0	22.0
15	4.5	3.5	4.0	14.5	12.0	13.0	23.0	19.5	21.5	24.5	21.0	23.0
16	4.0	2.0	3.0	14.5	13.5	14.0	23.5	20.0	22.0	25.5	22.0	23.5
17	5.0	2.5	4.0	13.5	11.5	12.5	23.5	20.5	22.0	25.0	23.0	24.0
18	7.5	4.0	5.5	13.0	11.5	12.5	23.0	20.5	21.5	25.0	23.0	24.0
19	7.0	5.5	6.0	13.0	11.5	12.0	21.5	20.0	20.5	24.5	22.5	24.0
20	5.5	4.0	5.0	12.0	10.0	11.0	21.0	19.5	20.5	24.5	23.0	24.0
21	6.5	3.5	5.0	12.5	10.5	11.5	20.5	19.5	19.5	25.5	23.0	24.5
22	9.0	5.5	7.0	12.5	9.5	11.0	21.0	19.0	20.0	25.5	23.5	24.5
23	9.5	8.5	9.0	13.0	10.0	11.5	20.5	17.0	18.5	22.5	19.5	21.5
24	9.0	7.5	8.0	13.5	11.0	12.5	18.5	17.0	18.0	24.0	20.0	22.0
25	9.0	7.0	8.0	14.5	11.5	13.5	18.0	16.0	17.0	23.5	20.5	22.0
26	11.0	8.5	9.5	15.0	13.0	14.0	18.0	15.5	17.0	23.5	21.5	22.5
27	10.5	8.5	9.5	15.0	14.0	14.5	19.0	15.5	17.0	25.0	21.0	23.0
28	8.0	6.5	7.0	17.0	15.0	16.0	19.5	16.5	18.0	26.0	23.0	24.5
29	---	---	---	17.5	14.5	16.0	19.0	18.0	18.5	26.5	23.5	25.0
30	---	---	---	19.0	16.0	17.5	19.0	16.5	18.0	26.5	23.5	25.0
31	---	---	---	17.5	15.0	16.5	---	---	---	26.5	23.5	25.0
MONTH	11.0	0.5	5.0	19.0	5.5	11.5	23.5	10.5	18.0	26.5	18.0	22.5

07026000 OBION RIVER AT OBION, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	23.0	24.5	28.0	25.0	26.0	26.5	24.0	25.0	28.0	25.0	27.0
2	26.5	23.0	25.0	27.5	23.0	25.0	25.0	23.0	24.5	28.0	26.0	27.0
3	25.5	23.0	24.5	28.5	24.5	27.0	26.5	24.5	25.0	28.0	25.5	27.0
4	26.5	23.0	25.0	29.5	26.0	28.0	27.5	25.0	26.0	28.0	25.5	27.0
5	27.5	24.0	26.0	30.0	28.0	29.0	27.5	26.0	27.0	28.5	26.0	27.0
6	27.5	25.0	26.0	31.0	28.5	29.5	29.0	26.5	27.5	27.0	24.0	25.5
7	25.0	21.0	22.5	31.5	29.0	30.0	29.5	27.5	29.0	26.5	24.0	25.5
8	23.0	20.5	22.0	31.0	29.0	30.0	29.5	27.0	28.5	26.5	24.5	26.0
9	23.5	20.5	22.5	30.0	24.0	26.0	29.0	24.0	26.5	26.5	24.5	25.5
10	25.0	21.5	23.5	26.0	24.5	25.5	29.0	26.0	27.5	26.0	24.0	25.0
11	26.0	23.0	25.0	26.0	25.5	26.0	29.0	26.5	28.0	24.0	21.5	23.0
12	27.5	24.0	26.0	27.5	24.5	26.0	29.0	27.0	27.5	24.0	21.5	23.0
13	27.5	25.0	25.5	30.5	26.0	28.0	27.5	24.5	25.5	24.0	23.0	23.5
14	25.5	24.0	25.0	31.0	27.5	29.5	24.5	23.0	24.0	23.0	21.5	22.0
15	25.0	23.0	24.0	31.5	29.0	30.5	26.0	23.5	24.5	24.0	21.5	23.0
16	25.5	23.5	24.5	31.5	29.5	30.5	26.0	24.0	25.0	24.0	22.0	23.0
17	25.0	22.5	23.5	31.5	29.5	30.5	24.5	23.5	24.0	25.5	22.5	24.0
18	27.0	23.0	24.5	31.0	29.5	30.5	25.0	22.5	23.5	26.5	24.0	25.5
19	26.5	25.0	26.0	31.0	29.0	30.0	24.5	22.0	23.0	26.5	24.0	25.0
20	25.5	23.5	25.0	29.5	27.5	29.0	24.5	21.5	23.0	24.0	21.5	23.0
21	27.5	23.5	25.5	29.5	25.5	28.0	25.5	22.0	24.0	23.5	20.5	22.0
22	27.5	23.5	25.0	30.0	28.0	29.0	26.5	23.5	25.0	24.0	20.5	22.0
23	26.5	23.5	25.0	29.5	25.5	27.5	26.5	24.0	25.5	24.0	22.0	23.0
24	26.5	22.5	25.0	30.0	27.0	28.5	26.0	24.0	24.5	24.0	20.0	21.5
25	26.5	23.5	25.0	30.0	26.0	27.0	26.5	22.5	24.5	20.0	19.5	19.5
26	26.0	22.5	24.0	28.0	24.5	26.0	27.0	24.5	26.0	21.5	19.5	20.5
27	24.5	22.0	23.0	27.5	24.5	26.5	27.5	25.0	26.0	22.0	20.5	21.5
28	26.5	23.0	25.0	27.5	24.5	25.0	28.0	25.0	26.5	22.5	21.0	21.5
29	25.5	23.5	24.5	27.5	23.5	25.5	28.0	24.0	25.5	22.0	20.0	20.5
30	28.0	24.5	26.5	27.5	23.5	25.0	25.0	22.0	23.5	20.5	19.5	19.5
31	---	---	---	27.0	24.0	25.5	27.5	24.0	25.5	---	---	---
MONTH	28.0	20.5	24.5	31.5	23.0	27.5	29.5	21.5	25.5	28.5	19.5	23.5
YEAR	31.5	0.5	16.5									

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	NOV 3,76		JAN 26,77		MAY 26,77		JUN 23,77	
TIME	1130		1015		1000		1000	
TOTAL CELLS/ML	40000		3800		2700		5900	
DIVERSITY: DIVISION	0.4		1.3		0.3		1.0	
.CLASS	0.4		1.3		0.3		1.0	
..ORDER	0.5		1.5		0.3		1.1	
...FAMILY	0.5		2.1		0.8		1.6	
....GENUS	0.5		2.1		0.8		1.7	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	2300#	84	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	160	4	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	540	14	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	230	6	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	39	1	280	11	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	69	2	--	-	--	-
...PHACOTACEAE								
....PTEROMONAS	--	-	49	1	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	2100	5	*	0	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-	140	2
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	*	0	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	--	-	*	0	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	*	0	--	-	--	-	--	-
....SYNEDRA	*	0	49	1	--	-	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	*	0	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	--	-	*	0	--	-	--	-
....NAVICULA	390	1	39	1	--	-	1600#	27
....PINNULARIA	--	-	--	-	140	5	140	2
...NITZSCHIACEAE								
....NITZSCHIA	--	-	290	8	--	-	1100#	20
...SURIRELLACEAE								
....SURIRELLA	--	-	39	1	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	37000#	92	2300#	60	--	-	2900#	49
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	*	0	--	-	--	-
....TRACHELOMONAS	390	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07026000 OBION RIVER AT OBION, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	JUL 12,77		AUG 26,77		SEP 20,77	
TIME	1000		1100		1000	
TOTAL CELLS/ML	420		2600		3900	
DIVERSITY: DIVISION	0.0		1.7		1.3	
.CLASS	0.0		1.7		1.3	
..ORDER	0.0		2.7		2.0	
...FAMILY	0.9		2.9		2.5	
....GENUS	0.9		3.2		2.7	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	63	2	--	-
....DICTYOSPHAERIUM	--	-	170	6	--	-
....KIRCHNERIELLA	--	-	--	-	42	1
....TETRAEDRON	--	-	21	1	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	--	-	170	4
....SCENEDESMUS	--	-	190	7	250	6
..ULOTRICHALES						
...ULOTRICHACEAE						
....GEMINELLA	--	-	190	7	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	--	-	--	-	42	1
....SPONDYLOSIUM	--	-	21	1	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	200	8	--	-
....MELOSIRA	--	-	84	3	--	-
..PENNALES						
...FRAGILARIACEAE						
....SYNEDRA	140#	33	--	-	42	1
...NAVICULACEAE						
....AMPHIPLEURA	--	-	--	-	42	1
....NAVICULA	280#	67	21	1	130	3
....PINNULARIA	--	-	--	-	42	1
...NITZSCHIACEAE						
....NITZSCHIA	--	-	390	15	170	4
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROCCOCCALES						
...CHROCCOCCACEAE						
....ANACYSTIS	--	-	650#	25	1600#	41
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	510#	19	330	9
....CYLINDROSPERMUM	--	-	52	2	--	-
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	830#	21
EUGLENOPHYTA (EUGLENOIDS)						
.CRYPTOPHYCEAE						
..CRYPTOMONIDALES						
...CRYPTOMONODACEAE						
....CRYPTOMONAS	--	-	21	1	--	-
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....PHACUS	--	-	31	1	--	-
....TRACHELOMONAS	--	-	31	1	210	5

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN

LOCATION.--Lat 36°21'09", long 89°25'07", Lake County, Hydrologic Unit 08010202, at Middle Landing in Reelfoot Lake State Park, 0.4 mi (0.6 km) east of Blue Bank, 0.8 mi (1.3 km) west of the spillway and 3.3 mi (5.3 km) southeast of Tiptonville.

DRAINAGE AREA.--240 mi^2 (622 km^2).

PERIOD OF RECORD.--December 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.22 ft (82.363 m) above mean sea level.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.65 ft (4.770 m), from recorded range in stage, about Apr. 26, 1973; minimum, 10.95 ft (3.338 m) from recorded range in stage, about Mar. 20, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of about 17.0 ft (5.18 m), at spillway, present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 12.40 ft (3.780 m) Apr. 24; minimum, 11.13 ft (3.392 m) Oct. 18.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.35	11.37	11.38	11.34	11.49	11.73	12.10	12.26	12.05	11.84	11.52	12.10
2	11.35	11.36	11.37	11.33	11.50	11.69	12.23	12.23	12.05	11.83	11.48	12.10
3	11.33	11.35	11.36	11.33	11.51	11.94	12.23	12.21	12.03	11.79	11.45	12.10
4	11.30	11.37	11.38	11.34	11.52	12.02	12.13	12.18	12.00	11.78	11.43	12.07
5	11.33	11.31	11.36	11.35	11.53	12.13	12.13	12.18	11.96	11.76	11.40	12.06
6	11.34	11.32	11.52	11.36	11.53	12.22	12.11	12.20	12.01	11.74	11.38	12.07
7	11.33	11.37	11.42	11.37	11.53	12.20	12.09	12.21	11.91	11.71	11.37	12.05
8	11.28	11.29	11.37	11.37	11.52	12.17	12.08	12.21	11.84	11.71	11.34	12.03
9	11.25	11.29	11.35	11.42	11.53	12.17	12.05	12.20	11.86	11.75	11.32	12.04
10	11.24	11.36	11.45	11.43	11.54	12.16	12.03	12.14	11.82	11.77	11.30	12.02
11	11.22	11.35	11.43	11.42	11.57	12.23	12.01	12.12	11.79	11.77	11.29	12.00
12	11.20	11.34	11.45	11.42	11.58	12.24	12.02	12.10	11.78	11.77	11.29	11.94
13	11.22	11.33	11.42	11.42	11.59	12.25	12.01	12.07	11.76	11.77	11.36	12.14
14	11.18	11.33	11.42	11.44	11.65	12.25	12.01	12.06	11.74	11.76	11.57	12.13
15	11.25	11.32	11.42	11.50	11.62	12.28	11.99	12.04	11.83	11.74	11.65	12.11
16	11.22	11.31	11.40	11.50	11.60	12.24	11.98	12.02	11.81	11.72	11.79	12.11
17	11.18	11.28	11.42	11.51	11.60	12.10	11.97	11.98	11.80	11.70	11.93	12.08
18	11.13	11.27	11.40	11.50	11.60	12.18	11.93	12.00	11.78	11.67	12.04	12.06
19	11.19	11.31	11.37	11.50	11.61	12.09	12.08	11.98	11.78	11.65	12.08	12.14
20	11.16	11.30	11.47	11.50	11.62	12.10	12.07	11.98	11.77	11.62	12.11	12.10
21	11.14	11.28	11.38	11.50	11.56	12.06	12.12	11.93	11.76	11.60	12.11	12.09
22	11.14	11.27	11.35	11.51	11.47	12.07	12.22	12.08	11.78	11.61	12.13	12.06
23	11.19	11.26	11.38	11.51	11.57	12.08	12.29	12.15	11.78	11.59	12.10	12.04
24	11.37	11.23	11.37	11.51	11.62	12.07	12.40	12.12	11.78	11.54	12.14	12.14
25	11.38	11.18	11.38	11.52	11.73	12.06	12.39	12.16	11.79	11.62	12.09	12.13
26	11.38	11.33	11.37	11.54	11.72	12.05	12.36	12.14	11.79	11.62	12.05	12.05
27	11.36	11.47	11.33	11.53	11.72	12.05	12.32	12.12	11.84	11.57	12.03	12.03
28	11.32	11.44	11.27	11.51	11.67	12.02	12.32	12.10	11.84	11.55	12.01	12.09
29	11.34	11.37	11.35	11.51	---	12.08	12.33	12.08	11.84	11.52	12.14	12.19
30	11.35	11.35	11.47	11.50	---	12.10	12.31	12.10	11.80	11.49	12.14	12.10
31	11.38	---	11.35	11.50	---	12.15	---	12.07	---	11.51	12.12	---
MEAN	11.27	11.32	11.39	11.45	11.58	12.10	12.14	12.11	11.85	11.68	11.75	12.08
MAX	11.38	11.47	11.52	11.54	11.73	12.28	12.40	12.26	12.05	11.84	12.14	12.19
MIN	11.13	11.18	11.27	11.33	11.47	11.69	11.93	11.93	11.74	11.49	11.29	11.94

WTR YR 1977 MEAN 11.73 MAX 12.40 MIN 11.13

07029500 HATCHIE RIVER AT BOLIVAR, TN

LOCATION.--Lat 35°16'31", long 88°58'36", Hardeman County, Hydrologic Unit 08010208, on left bank on upstream end of bridge pier on State Highway 18, 250 ft (76 m) upstream from Illinois Central Gulf Railroad bridge, 0.6 mi (1.0 km) downstream from Spring Creek, and 1.5 mi (2.4 km) northeast of Bolivar and at mile 135.1 (217.4 km).

DRAINAGE AREA.--1,480 mi^2 (3,833 km^2).

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 323.49 ft (98.600 m) above mean sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--48 years, 2,345 ft^3/s (66.41 m^3/s), 21.52 in/yr (547 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft^3/s (1,740 m^3/s) Mar. 18, 1973, gage height, 21.66 ft (6.602 m), from rating curve extended above 32,000 ft^3/s (906 m^3/s); minimum, 78 ft^3/s (2.21 m^3/s) Sept. 2, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft^3/s (241 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 7	1600	*20,800	589	18.12	5.523	Apr. 9	0200	9,740	276	16.01	4.880
Mar. 15	2300	11,500	326	16.45	5.014						

Minimum discharge, 242 ft^3/s (6.85 m^3/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	758	3360	1840	1510	1220	3060	1580	3550	555	465	897	268
2	673	3310	1710	1490	1050	3280	1450	3090	739	378	837	263
3	563	3050	1500	1390	974	4050	1610	2470	697	334	714	256
4	490	2590	1270	1250	958	9600	2930	1860	529	328	571	250
5	454	1980	1050	1170	974	12100	4660	1670	421	325	469	249
6	468	1430	934	1250	961	14400	5240	1710	373	313	399	360
7	526	987	884	1610	910	20000	5630	1640	343	296	355	343
8	760	774	912	2030	838	18600	8420	1400	320	281	336	310
9	776	675	1010	2420	776	14300	9420	1120	306	282	330	280
10	652	619	1030	2760	749	10800	8290	908	300	307	320	274
11	555	591	963	2850	751	8700	7150	780	294	323	328	268
12	510	582	912	2850	831	8970	6210	687	293	357	302	270
13	482	575	936	2870	994	9000	5420	621	299	354	307	320
14	462	575	1040	3670	1140	8930	4770	570	313	311	310	420
15	454	584	1130	4540	1190	10500	4140	539	385	290	351	924
16	445	606	1080	4500	1070	11100	3490	515	503	283	483	1270
17	440	629	987	4560	943	9710	2500	494	518	297	617	1580
18	437	621	899	4560	844	8230	1670	470	512	419	543	1790
19	440	595	829	4540	793	7060	1110	456	612	470	465	1780
20	481	568	780	4460	760	6110	874	440	700	511	411	1610
21	538	556	737	4280	729	5380	772	427	737	457	371	1460
22	606	551	711	4120	701	4730	989	415	617	389	339	1350
23	627	558	681	3850	711	4140	2220	398	483	348	316	1000
24	669	546	642	3400	1100	3500	3710	382	412	331	300	922
25	1010	525	681	2750	1710	2570	4440	379	369	376	292	1680
26	1740	548	891	2300	2190	1830	4730	389	349	396	291	3790
27	2330	755	1320	2130	2550	1400	4520	413	370	388	289	5080
28	2780	1120	1680	2030	2820	1220	4260	424	501	403	334	5100
29	2910	1580	1790	1880	---	1310	4120	410	704	423	335	5330
30	3150	1810	1720	1700	---	1520	3870	391	617	444	293	6530
31	3290	---	1610	1470	---	1640	---	450	---	697	274	---
TOTAL	30476	33250	34159	86190	31237	227740	120195	29468	14171	11576	12779	45327
MEAN	983	1108	1102	2780	1116	7346	4007	951	472	373	412	1511
MAX	3290	3360	1840	4560	2820	20000	9420	3550	739	697	897	6530
MIN	437	525	642	1170	701	1220	772	379	293	281	274	249
CFSM	.66	.75	.75	1.88	.75	4.96	2.71	.64	.32	.25	.28	1.02
IN.	.77	.84	.86	2.17	.79	5.72	3.02	.74	.36	.29	.32	1.14

CAL YR 1976 TOTAL 718619 MEAN 1963 MAX 7890 MIN 293 CFSM 1.33 IN 18.06
WTR YR 1977 TOTAL 676568 MEAN 1854 MAX 20000 MIN 249 CFSM 1.25 IN 17.01

07029500 HATCHIE RIVER AT BOLIVAR, TN

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1968, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT							
06...	1645	394	60	19.0	--	--	--
JAN							
04...	1215	1270	68	.5	--	--	--
20...	1200	6420	60	1.0	42	728	92
FEB							
03...	1000	969	75	1.0	39	102	45
11...	0935	759	82	3.0	--	--	--
11...	1200	745	85	3.5	40	80	56
16...	1000	1060	75	5.0	53	152	64
24...	1430	1160	70	9.5	116	363	97
MAR							
04...	1200	10300	40	10.5	215	5980	87
04...	1420	10300	--	9.1	--	--	--
05...	1645	12200	35	10.0	140	4610	89
06...	1445	14900	40	10.0	99	3980	85
07...	1315	20400	40	9.5	95	5230	91
09...	1110	14500	40	11.0	92	3600	90
11...	1500	8510	--	13.0	78	1790	99
17...	1400	9710	--	16.0	87	2280	87
21...	0915	5350	55	14.0	--	--	--
APR							
01...	1330	1570	--	17.0	195	827	23
07...	1530	5610	--	16.0	56	848	94
28...	1500	6400	--	18.5	38	657	83
MAY							
02...	0950	3050	76	19.0	--	--	--
05...	1430	1700	--	22.0	49	225	90
11...	1000	733	--	--	46	91	94
20...	1500	380	--	23.5	82	84	91
26...	1330	340	--	24.0	63	58	90
JUN							
03...	1130	660	--	24.0	82	146	97
06...	0945	373	64	25.0	--	--	--
07...	1330	300	--	25.5	79	64	75
16...	1400	440	--	24.5	60	71	95
30...	1130	690	--	27.0	65	121	91
JUL							
27...	0830	390	90	26.0	--	--	--
SEP							
13...	1400	316	67	25.0	52	44	--
24...	1700	936	90	22.0	93	235	94
24...	1945	1050	110	21.5	62	176	86
24...	2345	1240	80	22.0	111	372	79
25...	0730	1540	60	20.5	212	881	83
25...	1115	1610	65	21.0	395	1720	98
26...	1200	4120	55	20.5	168	1870	89
26...	2000	4770	55	23.0	127	1640	87
26...	2300	4790	50	22.0	102	1320	92
27...	1200	5120	50	23.0	123	1700	47
27...	1645	5240	50	24.0	57	806	92
28...	1040	5170	55	20.5	59	824	64

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN

LOCATION.--Lat 35°18'37", long 89°38'23", Shelby County, Hydrologic Unit 08010209, on left bank 20 ft (6 m) downstream from bridge on U.S. Highways 70 and 79, 1.5 mi (2.4 km) upstream from Beaver Creek, 1.5 mi (2.4 km) northeast of Arlington, and at mile 30.4 (48.9 km).

DRAINAGE AREA.--262 mi^2 (679 km^2).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 248 ft (76 m), from topographic map.

REMARKS.--Records poor. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--8 years, 350 ft^3/s (9.91 m^3/s), 18.14 in/yr (461 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft^3/s (671 m^3/s) Mar. 13, 1975, gage height, 24.96 ft (7.608 m); minimum, 66 ft^3/s (1.87 m^3/s) Apr. 6, 7, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,110 ft^3/s (145 m^3/s) at 2345 hours Mar. 4, gage height, 21.18 ft (6.456 m); minimum, 73 ft^3/s (2.07 m^3/s) Sept. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	117	109	101	90	139	131	99	89	90	82	77
2	92	107	107	100	90	132	353	96	88	88	81	77
3	92	102	104	100	91	738	634	264	88	87	80	77
4	91	100	103	100	94	3760	1970	387	88	87	80	77
5	90	99	101	100	96	2800	823	144	88	86	80	89
6	92	99	102	103	98	473	247	114	86	86	79	95
7	90	96	110	143	96	244	172	108	86	85	78	79
8	90	96	109	144	98	196	152	104	86	85	78	81
9	89	98	106	229	99	173	129	103	86	130	78	77
10	89	98	104	313	100	159	120	101	86	156	78	78
11	89	96	104	136	100	155	114	99	86	90	78	73
12	88	96	109	113	226	1690	112	96	86	88	78	73
13	88	98	110	109	202	581	109	98	86	86	78	90
14	88	100	106	1980	145	235	108	99	85	106	150	180
15	87	101	107	1060	124	190	107	100	84	170	300	155
16	87	100	106	318	113	164	103	101	87	100	130	114
17	87	99	103	137	108	150	101	95	145	100	99	81
18	88	99	102	112	107	149	100	92	120	88	92	79
19	88	101	103	100	103	145	100	92	101	85	87	135
20	94	102	101	96	101	140	101	92	99	85	85	118
21	92	102	101	92	101	139	101	91	96	101	83	83
22	89	102	101	91	101	137	101	91	93	91	83	79
23	89	102	101	91	392	134	296	91	92	118	82	78
24	285	101	101	96	830	134	349	89	91	148	80	424
25	1760	100	116	115	262	131	148	95	91	359	79	1360
26	698	202	132	109	185	129	126	98	299	94	80	473
27	164	333	115	116	211	131	104	92	203	88	79	668
28	120	157	110	114	162	155	102	91	102	85	78	525
29	113	128	106	99	---	160	100	90	94	84	78	763
30	146	114	103	92	---	143	99	90	91	83	78	2410
31	149	---	103	90	---	134	---	89	---	83	78	---
TOTAL	5497	3445	3295	6699	4525	13940	7312	3491	3102	3312	2849	8768
MEAN	177	115	106	216	162	450	244	113	103	107	91.9	292
MAX	1760	333	132	1980	830	3760	1970	387	299	359	300	2410
MIN	87	96	101	90	90	129	99	89	84	83	78	73
CFSM	.68	.44	.41	.82	.62	1.72	.93	.43	.39	.41	.35	1.12
IN.	.78	.49	.47	.95	.64	1.98	1.04	.50	.44	.47	.40	1.24

CAL YR 1976 TOTAL 78373 MEAN 214 MAX 3010 MIN 87 CFSM .82 IN 11.13
WTR YR 1977 TOTAL 66235 MEAN 181 MAX 3760 MIN 73 CFSM .69 IN 9.40

07030245 KELLY BRANCH NEAR CLOPTON, TN

LOCATION.--Lat 35°25'57", long 89°39'15", Tipton County, Hydrologic Unit 08010209, on right bank at downstream end of bridge on unnamed county road 1.1 mi (1.8 km) south of State Highway 14, 2.1 mi (3.4 km) southeast of Clopton, and at mile 1.0 (1.6 km).

DRAINAGE AREA.--7.79 mi^2(20.18 km^2).

PERIOD OF RECORD.--February 1975 to May 1976 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 290 ft (88 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,260 ft^3/s (35.7 m^3/s) Mar. 12, 1975, gage height, 19.73 ft (6.013 m); minimum, 0.23 ft^3/s (0.007 m^3/s) Aug. 8, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October 1975 to May 1976, 862 ft^3/s (24.4 m^3/s) Feb. 18, gage height, 16.71 ft (5.093 m); minimum, 0.30 ft^3/s (0.008 m^3/s) Oct. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, FEBRUARY TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	4.6	4.3	33	9.0	.86	.50	.30
2					---	4.1	3.5	2.4	1.1	.86	.50	.27
3					---	3.8	2.7	13	.92	.93	2.4	.30
4					---	3.6	2.1	2.7	.92	.86	4.3	.30
5					---	3.1	2.1	1.6	.86	.86	.93	.33
6					---	3.1	2.1	1.1	.86	.93	.55	.41
7					---	3.4	1.7	20	.80	1.0	.33	.41
8					---	2.8	1.7	188	.74	.80	.27	.37
9					---	2.7	39	14	.68	1.0	.24	3.0
10					---	79	4.4	3.4	.68	1.1	.24	18
11					---	31	2.4	6.3	.57	.55	.24	1.9
12					---	878	1.7	6.9	.57	.45	.33	10
13					---	294	1.7	1.7	.45	.45	.33	.55
14					---	88	8.5	1.3	.41	.45	.33	.30
15					---	20	3.2	154	2.8	.41	.33	.30
16					---	15	2.2	7.3	.61	.41	.37	.30
17					---	11	1.7	25	.55	.37	.33	.41
18					---	108	13	5.3	.55	.37	.33	.45
19					---	16	37	2.0	.50	.41	.37	8.4
20					---	8.7	2.4	1.3	.50	.45	.33	6.5
21					---	6.9	1.7	1.1	.50	.45	.33	.41
22					---	8.2	1.6	1.1	.45	8.7	.33	.33
23					---	5.9	1.6	.92	.45	1.4	.33	.30
24					13	9.2	1.3	.86	.41	1.0	.33	.30
25					7.5	4.1	4.6	.86	.37	1.0	.37	.30
26					5.3	3.5	1.6	.86	.33	.73	.33	.37
27					4.3	20	1.3	.86	12	.50	.33	.33
28					4.9	654	1.3	.92	1.5	.45	.33	.37
29					---	166	1.7	.92	1.1	.41	.41	.37
30					---	19	5.7	5.0	1.0	.33	1.7	.41
31					---	8.0	---	15	---	.33	.37	---
TOTAL	---	---	---	---	---	2484.7	159.8	518.70	42.18	28.82	18.71	56.29
MEAN	---	---	---	---	---	80.2	5.33	16.7	1.41	.93	.60	1.88
MAX	---	---	---	---	---	878	39	188	12	8.7	4.3	18
MIN	---	---	---	---	---	2.7	1.3	.86	.33	.33	.24	.27
CFSM	---	---	---	---	---	10.3	.68	2.14	.18	.12	.08	.24
IN.	---	---	---	---	---	11.86	.76	2.48	.20	.14	.09	.27

07030245 KELLY BRANCH NEAR CLOPTON, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1975 TO MAY 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.52	8.0	1.5	1.5	1.3	3.3	.59				
2	.36	.52	2.0	70	1.2	.86	2.1	.54				
3	.40	.62	1.0	2.5	1.2	.86	1.6	.49				
4	.44	38	.80	1.5	1.2	1.0	1.2	.71				
5	.44	2.2	.70	1.2	26	100	1.0	---				
6	.44	91	7.0	1.5	5.7	3.0	.93	---				
7	.44	16	2.0	6.0	2.3	1.6	.86	---				
8	.44	1.1	1.3	1.5	2.1	112	.80	---				
9	.44	16	1.0	1.3	2.0	26	.64	---				
10	.48	25	.90	1.2	1.9	4.6	.64	---				
11	.62	3.5	.80	13	1.7	2.7	1.4	---				
12	.74	.85	.75	2.5	1.6	8.6	1.1	---				
13	.99	.70	.74	4.5	1.7	2.4	2.6	---				
14	1.2	.65	3.5	2.0	1.7	1.6	2.4	---				
15	1.6	.60	16	1.3	2.0	1.5	.93	---				
16	2.0	.57	5.0	1.1	1.7	1.2	.74	---				
17	1.6	.56	1.5	1.0	320	1.1	.64	---				
18	1.1	.55	1.0	.95	193	1.0	.59	---				
19	.80	.55	.90	.90	5.3	1.1	.59	---				
20	.86	2.0	.80	.85	3.4	5.7	.59	---				
21	.92	1.0	.75	.85	305	2.6	.69	---				
22	.99	.60	.73	.82	6.6	.93	.59	---				
23	.99	.54	.70	1.1	2.6	.86	.54	---				
24	.99	.53	.66	1.7	2.0	.80	13	---				
25	44	.52	.63	34	1.6	1.0	2.5	---				
26	.92	6.0	.60	7.9	1.3	2.3	.69	---				
27	.36	1.5	1.5	3.4	1.5	4.1	.59	---				
28	.36	.80	.90	2.6	1.4	2.9	.59	---				
29	.48	.60	1.0	2.3	1.4	562	.49	---				
30	.48	150	6.4	1.7	---	44	.54	---				
31	.40	---	3.0	1.5	---	15	---	---				
TOTAL	66.64	363.58	72.56	174.17	900.6	914.61	44.87	---				
MEAN	2.15	12.1	2.34	5.62	31.1	29.5	1.50	---				
MAX	44	150	16	70	320	562	13	---				
MIN	.36	.52	.60	.82	1.2	.80	.49	---				
CFSM	.28	1.55	.30	.72	3.99	3.79	.19	---				
IN.	.32	1.74	.35	.83	4.30	4.37	.21	---				

07031650 WOLF RIVER NEAR GERMANTOWN, TN

LOCATION.--Lat 35°06'59", long 89°48'05", Shelby County, Hydrologic Unit 08010210, on left bank at bridge on Germantown Road, 2.1 mi (3.4 km) north of Germantown, 3.6 mi (5.8 km) downstream from Grays Creek, 6.4 mi (10.3 km) upstream from Fletcher Creek, and at mile 18.9 (30.4 km).

DRAINAGE AREA.--699 mi^2 (1,810 km^2).

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 235.76 ft (71.860 m) above mean sea level (levels by Soil Conservation Service).

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--8 years, 958 ft^3/s (27.13 m^3/s), 18.61 in/yr (473 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft^3/s (946 m^3/s) Mar. 14, 1975, gage height, 27.98 ft (8.528 m); minimum, 190 ft^3/s (5.38 m^3/s) Sept. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,810 ft^3/s (221 m^3/s) at 0200 Mar. 4, gage height, 15.38 ft (4.688 m); minimum, 241 ft^3/s (6.83 m^3/s) Sept. 5, 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	301	836	539	456	519	799	492	472	275	382	354	244
2	300	761	523	446	502	749	708	424	298	368	336	244
3	298	618	530	422	488	2110	1010	502	298	340	320	244
4	294	516	523	409	475	4670	2750	1170	295	309	300	243
5	291	466	500	426	468	6780	2030	1240	298	281	285	241
6	287	430	478	621	456	6970	2000	780	289	266	271	241
7	300	410	486	973	443	5580	1820	556	275	253	268	241
8	327	389	470	963	434	4040	1700	488	261	245	258	249
9	326	373	450	1170	424	2750	1570	440	247	519	251	268
10	310	360	437	1100	424	1960	1310	403	244	438	247	279
11	301	355	432	930	418	1340	926	372	244	346	245	273
12	296	352	449	841	532	2270	708	348	244	392	244	260
13	292	350	460	763	525	1730	605	327	443	382	244	308
14	290	348	452	2910	505	1520	532	313	360	366	269	491
15	290	351	438	1980	495	1510	492	304	662	369	415	410
16	288	355	427	2530	475	1640	485	292	776	367	549	400
17	285	357	416	2220	468	1650	434	284	633	334	498	376
18	283	358	408	1990	465	1390	412	278	522	299	424	370
19	281	358	404	1500	459	999	418	272	485	318	337	388
20	292	360	401	1280	446	803	431	266	403	328	292	424
21	329	366	392	1010	431	701	403	266	366	300	274	468
22	341	366	381	803	421	633	403	261	330	303	271	481
23	336	355	371	683	850	580	665	261	322	296	259	458
24	516	348	368	654	1040	546	587	258	312	293	257	2990
25	1920	346	402	676	874	522	485	258	301	346	252	2070
26	1310	586	444	665	787	502	515	307	487	428	247	2160
27	1450	733	448	690	705	488	591	327	506	498	245	3080
28	1410	736	455	687	749	556	626	292	532	534	244	2780
29	1210	712	443	630	---	556	615	286	492	486	244	4130
30	1040	604	439	577	---	532	536	281	394	413	244	4570
31	843	---	462	560	---	515	---	281	---	373	244	---
TOTAL	16637	13855	13828	31565	15278	57391	26259	12609	11594	11172	9188	29381
MEAN	537	462	446	1018	546	1851	875	407	386	360	296	979
MAX	1920	836	539	2910	1040	6970	2750	1240	776	534	549	4570
MIN	281	346	368	409	418	488	403	258	244	245	244	241
CFSM	.77	.66	.64	1.46	.78	2.65	1.25	.58	.55	.52	.42	1.40
IN.	.89	.74	.74	1.68	.81	3.05	1.40	.67	.62	.59	.49	1.56

CAL YR 1976 TOTAL 272425 MEAN 744 MAX 4880 MIN 270 CFSM 1.06 IN 14.50
WTR YR 1977 TOTAL 248757 MEAN 682 MAX 6970 MIN 241 CFSM .98 IN 13.24

07031680 FLETCHER CREEK NEAR CORDOVA, TN

LOCATION.--Lat 35°11'21", long 89°45'42", Shelby County, Hydrologic Unit 08010210, on right bank at upstream side of bridge at Berryhill Road, 1.3 mi (2.1 km) south of U.S. Highway 64, and 2.5 mi (4.0 km) north of Cordova.

DRAINAGE AREA.--1.45 mi^2 (3.76 km^2).

PERIOD OF RECORD.--June 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 319 ft (97 m), from topographic map.

REMARKS.--Records for 1974 and 1975 are poor. Records for 1976 and 1977 are fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 740 ft^3/s (21.0 m^3/s) Mar. 12, 1975, gage height, 13.00 ft (3.962 m), from graphic comparison with nearby stations; no flow many days each year.

EXTREMES FOR WATER YEARS 1974-77.--Peak discharges above base of 250 ft^3/s (7.08 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Aug. 12, 1974	1545	396	11.2	11.32	3.450
Dec. 24, 1974	1545	304	8.61	10.70	3.261
Jan. 10, 1975	1125	292	8.27	10.61	3.261
Feb. 23, 1975	0755	264	7.48	10.39	3.167
Mar. 12, 1975	Unknown	a*740	21.0	a13.00	3.962
Mar. 28, 1975	0200	303	8.58	10.69	3.258
May 31, 1975	1055	256	7.25	10.32	3.146
July 23, 1975	1530	312	8.84	10.76	3.280
Feb. 5, 1976	1405	250	7.08	10.36	3.158
Feb. 17, 1976	2120	250	7.08	10.36	3.158
June 29, 1976	2315	281	7.96	10.61	3.234
Sept. 3, 1976	2335	273	7.73	10.55	3.216
Sept. 4, 1976	1110	*353	10.0	11.16	3.402
Mar. 3, 1977	1645	369	10.5	9.28	2.829
Apr. 23, 1977	1415	556	15.7	10.53	3.210
Sept. 24, 1977	1225	*622	17.6	10.92	3.328
Sept. 29, 1977	1145	317	8.98	8.87	2.704

a Estimated from graphic comparisons with nearby stations.

No flow many days during each year.

DISCHARGE, IN CUBIC FEET PER SECOND, JUNE TO SEPTEMBER 1974
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	1.2	.00	.01
2									---	1.8	.00	1.4
3									---	.02	.00	.36
4									---	.00	.00	.00
5									---	.00	.00	.00
6									---	.00	.00	.00
7									---	.00	.00	.00
8									---	.00	.00	.00
9									---	.00	.00	.00
10									---	.00	.00	.00
11									---	.00	.00	2.6
12									---	.00	38	.03
13									---	.00	.45	.00
14									---	.00	.31	.00
15									---	.00	3.3	.00
16									---	.00	.01	.00
17									---	.00	.00	.00
18									---	.00	1.6	.00
19									---	.00	.00	.00
20									---	.00	.00	.00
21									---	.00	.00	.78
22									---	.00	.00	.00
23									---	9.2	.00	.00
24									---	.00	.00	.00
25									---	.00	.00	.15
26									---	.00	.00	.00
27									.00	.00	.00	.52
28									.00	.00	.00	1.1
29									.00	.00	2.7	.34
30									.00	.00	9.0	.00
31									---	.00	.20	---
TOTAL									---	12.22	55.57	7.29
MEAN									---	.39	1.79	.24
MAX									---	9.2	38	2.6
MIN									---	.00	.00	.00
CFSM									---	.27	1.23	.17
IN.									---	.31	1.42	.19

07031680 FLETCHER CREEK NEAR CORDOVA, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.12	5.8	27	.06	.36	.68	.71	.00	.01	.01
2	.00	.00	.06	.60	9.9	.04	.24	.22	.04	.00	.04	.00
3	.00	.00	.04	14	16	.03	.11	17	.02	.00	.02	.00
4	.00	18	.03	.96	17	.02	.06	.82	.01	.00	.02	.00
5	.00	.20	.03	.21	31	.02	.05	.17	.02	.00	.01	.00
6	.00	.00	.03	.12	3.5	.01	.04	.11	.02	.00	.00	.00
7	.00	.00	.04	.06	.70	.02	.03	.08	.01	.00	.00	.00
8	.00	.00	.03	11	.31	.01	.03	18	.01	.00	.00	.00
9	.00	.00	.02	2.1	.29	.03	11	4.1	.01	.00	.00	8.6
10	.00	.34	.02	63	.16	25	.82	.64	.03	.00	.00	13
11	.00	3.7	3.1	4.0	.21	18	.09	22	.16	.00	.00	8.0
12	.00	.10	.18	1.6	.11	239	.06	12	.01	.00	.00	21
13	.00	.01	.05	.44	.05	67	.06	5.5	.00	.00	.00	1.5
14	.00	.00	.04	.58	.12	22	1.4	4.5	.00	.00	.00	.72
15	2.2	.00	7.4	1.2	.19	2.7	.11	22	1.9	.00	.00	.37
16	.03	.00	.31	.62	21	.70	.05	8.1	.00	.00	.00	.17
17	.00	.00	.10	.19	3.2	.31	.03	8.1	.01	.00	.00	.04
18	.00	.00	.05	.23	.35	10	.07	5.2	.00	.00	.00	.00
19	.00	.01	.04	.73	.12	2.1	2.0	3.6	.00	.00	.00	2.9
20	.00	15	.04	.49	.08	.24	.02	3.2	.00	.00	.00	2.7
21	.00	.10	.03	.08	.04	.12	.02	2.9	.00	.00	.00	.12
22	.00	.02	.02	.04	3.0	2.2	.02	2.7	.00	1.4	.00	.01
23	.00	.01	.02	.03	52	2.3	.01	2.2	.00	37	.00	.00
24	.00	14	52	.03	3.2	1.8	.01	1.9	.00	.80	.00	.00
25	.00	3.6	19	.04	.53	.04	.81	1.7	.00	.00	.00	.00
26	.00	.24	1.8	.03	.15	.02	.01	16	.00	2.0	.00	.00
27	.00	.12	18	.02	.18	5.7	.01	6.2	.37	.10	.00	.00
28	.02	.08	4.7	.02	.13	49	1.2	9.1	.00	.00	.00	.00
29	3.8	.06	18	.14	---	27	.16	16	.00	.00	.01	.00
30	.00	.24	2.5	.02	---	3.0	13	4.5	.00	.00	7.0	.00
31	.00	---	1.9	12	---	.90	---	25	---	.00	.10	---
TOTAL	6.05	55.83	129.70	120.38	190.52	479.37	31.88	224.22	3.33	41.30	7.21	59.14
MEAN	.20	1.86	4.18	3.88	6.80	15.5	1.06	7.23	.11	1.33	.23	1.97
MAX	3.8	18	52	63	52	239	13	25	1.9	37	7.0	21
MIN	.00	.00	.02	.02	.04	.01	.01	.08	.00	.00	.00	.00
CFSM	.14	1.28	2.88	2.68	4.69	10.7	.73	4.99	.08	.92	.16	1.36
IN.	.16	1.43	3.33	3.09	4.88	12.29	.82	5.75	.09	1.06	.18	1.52

WTR YR 1975 TOTAL 1348.93 MEAN 3.70 MAX 239 MIN .00 CFSM 2.55 IN 34.58

07031680 FLETCHER CREEK NEAR CORDOVA, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.7	.34	.17	.10	.93	.00	.16	.00	.00	1.7
2	.00	.00	.52	25	.12	.08	.45	.00	.08	.00	.00	.01
3	.00	.00	.29	7.9	.12	.07	.26	.00	.01	.21	.00	13
4	.00	3.6	.16	1.2	.12	.08	.16	.00	.00	.12	.00	88
5	.00	.52	.13	.60	25	16	.10	.00	.69	.00	.00	.15
6	.00	26	4.7	.52	2.6	.71	.08	.98	.07	.00	.00	.01
7	.00	2.8	.75	2.7	.78	.29	.04	.01	.00	.00	.00	.00
8	.00	.68	.29	.72	.54	24	.02	.00	.00	.00	.00	.00
9	.00	4.0	.17	.24	.36	7.7	.01	.00	.00	.00	.00	.00
10	.00	4.5	.12	.30	.33	1.4	.01	.00	.00	.00	.00	.00
11	.00	.46	.12	3.5	.38	.58	.03	.00	.00	.00	.00	.00
12	.00	.17	.08	1.1	.30	3.1	.08	.00	.00	.00	.00	.00
13	.00	.08	.05	3.2	.25	.64	.19	.00	.00	.00	.00	.00
14	.00	.03	.05	1.1	.18	.33	.20	.01	.00	.00	.00	.00
15	.00	.03	8.0	.52	.16	.24	.01	.01	.00	.00	.00	.00
16	.00	.03	1.9	.43	.16	.15	.01	.01	.60	.00	.00	.00
17	1.1	.02	.50	.20	34	.09	.00	.00	.00	.00	.00	.00
18	.02	.01	.24	.13	13	.08	.00	.00	5.4	.00	.00	.00
19	.00	.01	.17	.16	1.6	.06	.00	.00	.13	.00	.00	.00
20	.00	.92	.38	.24	.94	.06	.00	.00	.00	.00	.00	.00
21	.00	.08	.40	.18	46	.04	.00	.00	.00	.00	.00	.00
22	.00	.01	.35	.15	2.0	.02	.00	.00	.00	.00	.00	.00
23	.00	.00	.30	.16	.74	.02	.00	.00	.00	.00	.00	.00
24	.00	.01	.14	.26	.48	.03	.12	.00	.01	.00	.00	.00
25	7.2	.01	20	9.6	.35	.12	.22	.00	1.9	.00	.00	.00
26	.65	8.4	6.2	1.8	.27	4.6	.00	.00	.01	.00	.00	.00
27	.06	1.7	1.1	.55	.18	3.8	.00	.06	.00	.00	.00	.12
28	.00	.32	.56	.36	.15	.37	.00	1.9	.00	.00	.00	.00
29	.00	.17	.71	.33	.13	59	.00	.32	17	.00	.00	.00
30	.00	42	.82	.26	---	8.4	.00	.02	3.8	.00	.00	.00
31	.00	---	.71	.19	---	3.8	---	.00	---	.00	.00	---
TOTAL	9.03	96.56	51.61	63.94	131.41	135.96	2.92	3.32	29.86	.33	.00	102.99
MEAN	.29	3.22	1.66	2.06	4.53	4.39	.097	.11	1.00	.011	.000	3.43
MAX	7.2	42	20	25	46	59	.93	1.9	17	.21	.00	88
MIN	.00	.00	.05	.13	.12	.02	.00	.00	.00	.00	.00	.00
CFSM	.20	2.22	1.15	1.42	3.12	3.03	.07	.08	.69	.008	.000	2.37
IN.	.23	2.48	1.32	1.64	3.37	3.49	.07	.09	.77	.01	.00	2.64

CAL YR 1975 TOTAL 1314.55 MEAN 3.60 MAX 239 MIN .00 CFSM 2.48 IN 33.70
WTR YR 1976 TOTAL 627.93 MEAN 1.72 MAX 88 MIN .00 CFSM 1.19 IN 16.10

07031680 FLETCHER CREEK NEAR CORDOVA, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.04	.05	.00	.01	.06	.24	.07	.00	.00	.00	.00
2	.03	.02	.04	.00	.01	.08	16	.05	.00	.00	.00	.00
3	.01	.02	.03	.00	.02	77	15	1.6	.00	.00	.00	.00
4	.00	.01	.03	.02	.04	15	37	.08	.00	.00	.00	.00
5	.06	.00	.03	.05	.04	1.5	3.1	.06	.00	.00	.00	.00
6	.65	.00	.16	1.5	.01	.78	.65	.13	.00	.00	.00	.00
7	.03	.00	.53	1.4	.01	.54	.42	.03	.00	.00	.00	.00
8	.01	.00	.06	.28	.01	.54	.26	.04	.00	.00	.00	.00
9	.00	.00	.03	5.5	.02	.53	.18	.07	.00	.00	.00	.00
10	.00	.00	.03	.42	.02	.53	.16	.04	.00	.00	.00	.00
11	.00	.00	.12	.02	.03	4.4	.11	.01	.00	.00	.00	.00
12	.00	.00	.37	.01	4.6	30	.09	.00	.00	.00	.00	.00
13	.00	.00	.10	5.3	.11	2.7	.07	.00	.06	.00	.00	21
14	.00	.00	.07	53	.04	1.3	.05	.00	.01	.00	10	6.2
15	.00	.00	.04	1.1	.02	1.0	.03	.00	.00	.00	.03	.09
16	.00	.00	.04	.11	.01	.81	.02	.00	.00	.00	.00	.00
17	.00	.00	.04	.01	.01	.76	.02	.00	.12	.00	.00	.00
18	.00	.00	.03	.01	.01	.86	.01	.00	.00	.00	.00	.00
19	.00	.00	.03	.01	.01	.66	2.6	.00	.00	.01	.00	.00
20	.00	.00	.03	.01	.01	.59	2.2	.00	.00	.05	.00	.00
21	.00	.00	.01	.01	.01	.53	.10	.00	.00	.00	.00	.00
22	.00	.00	.01	.01	.01	.45	.38	.00	.00	.00	.00	.00
23	.00	.00	.01	.01	18	.50	65	.00	.00	.00	.00	.00
24	16	.00	.00	.05	3.1	.46	6.9	.00	.00	.00	.00	106
25	35	.00	1.7	.03	.52	.41	2.0	.00	.00	.00	.00	2.1
26	.43	9.8	.06	.02	.40	.41	.48	.00	.00	.00	.00	.21
27	.11	.25	.02	.03	.33	.47	.22	.00	.03	.00	.00	12
28	.04	.11	.02	.02	.21	3.6	.16	.00	.00	.00	.00	.39
29	.02	.15	.01	.01	---	.72	.13	.00	.00	.00	.00	28
30	4.1	.03	.01	.01	---	.42	.10	.00	.00	.00	.00	6.6
31	.13	---	.02	.01	---	.26	---	.00	---	.00	.00	---
TOTAL	56.63	10.43	3.73	68.96	27.62	147.87	153.68	2.18	.22	.06	10.03	182.59
MEAN	1.83	.35	.12	2.22	.99	4.77	5.12	.070	.007	.002	.32	6.09
MAX	35	9.8	1.7	53	18	77	65	1.6	.12	.05	10	106
MIN	.00	.00	.00	.00	.01	.06	.01	.00	.00	.00	.00	.00
CFSM	1.26	.24	.08	1.53	.68	3.29	3.53	.05	.005	.001	.22	4.20
IN.	1.45	.27	.10	1.77	.71	3.79	3.94	.06	.01	.00	.26	4.68

CAL YR 1976 TOTAL 541.52 MEAN 1.48 MAX 88 MIN .00 CFSM 1.02 IN 13.88
WTR YR 1977 TOTAL 664.00 MEAN 1.82 MAX 106 MIN .00 CFSM 1.26 IN 17.02

07031685 FLETCHER CREEK TRIBUTARY AT CHARLES BRYAN ROAD NEAR CORDOVA, TN

LOCATION.--Lat 35°10'07", long 89°49'27", Shelby County, Hydrologic Unit 08010210, on right bank at upstream side of bridge on Charles Bryan Road, and 2.9 mi (4.7 km) west of Cordova.

DRAINAGE AREA.--3.18 mi^2 (8.24 km^2).

PERIOD OF RECORD.--December 1974 to September 1977 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 264 ft (80 m), from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft^3/s (30.6 m^3/s) Sept. 24, 1977, gage height, 11.48 ft (3.499 m); no flow many days each year.

EXTREMES FOR WATER YEARS 1975-77.--Peak discharges above base of 550 ft^3/s (15.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 12, 1974	1240	682	19.3	8.89	2.710
Jan. 10, 1975	1215	608	17.2	8.40	2.560
Feb. 23, 1975	0740	672	19.0	8.82	2.688
Mar. 12, 1975	1115	764	21.6	9.44	2.877
Mar. 28, 1975	0230	595	16.9	8.31	2.533
July 23, 1975	1710	*899	25.5	10.35	3.155
Feb. 17, 1976	2235	562	15.9	8.08	2.463
Feb. 21, 1976	0830	607	17.2	8.39	2.557
Sept. 3, 1976	2400	686	19.4	8.91	2.716
Sept. 4, 1976	1235	*806	22.8	9.73	2.966
Mar. 3, 1977	1715	660	18.7	8.74	2.664
Apr. 23, 1977	1405	575	16.3	8.17	2.490
Sept. 24, 1977	1345	*1080	30.6	11.48	3.499
Sept. 27, 1977	0920	582	16.5	8.22	2.505

No flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	8.5	70	.56	1.4	1.4	1.9	.00	1.0	.00
2			---	2.5	12	.37	.88	.46	.88	3.0	.33	.00
3			---	18	25	.33	.45	23	.65	.60	.04	.00
4			---	2.6	12	.39	.34	1.2	.50	.00	.33	.00
5			---	1.3	39	.45	.31	.27	.47	.00	.11	.00
6			---	.97	4.3	.44	.22	.10	.36	.00	.01	.00
7			---	.77	1.6	.46	.24	.05	.23	.00	.00	.00
8			---	2.1	1.1	.45	.36	1.3	.19	1.2	.00	.00
9			---	3.3	.93	.47	56	.44	.11	.52	.00	.00
10			.06	166	.66	50	5.5	.05	.22	.00	.00	.00
11			3.2	5.7	.89	43	4.1	15	.23	5.6	.00	.00
12			.97	3.0	.65	456	3.0	2.4	.11	.01	.00	4.6
13			.33	2.0	.43	139	2.1	.25	.05	.00	.00	.04
14			.36	1.8	.39	18	3.1	.18	.04	.00	.00	.00
15			9.0	2.3	.43	3.8	1.8	13	.15	.00	.00	.00
16			1.2	2.0	44	2.6	1.4	1.7	.10	.00	.00	.00
17			.49	1.1	5.1	2.0	1.0	2.6	.02	.00	.00	.00
18			.30	1.2	1.6	13	.72	.94	.00	.00	.00	.00
19			.26	1.8	.79	3.6	1.4	.42	.00	.00	.00	2.0
20			.19	1.6	.52	1.4	.44	.37	.00	.00	.00	3.8
21			.13	1.0	.40	.99	.30	.30	.00	.00	.00	.02
22			.12	.80	7.4	2.5	.24	.24	.00	.00	.00	.00
23			.11	.75	163	2.0	.19	.15	.00	126	.00	.00
24			224	.81	4.2	2.8	.15	.10	.00	2.9	.00	.00
25			53	.95	1.6	.65	1.8	.04	.00	.87	.00	.00
26			3.4	.60	.89	.51	4.0	74	.00	4.2	.00	.00
27			35	.53	.75	.55	.22	6.7	9.1	.11	.00	.00
28			4.5	.55	.64	124	1.7	19	.46	.02	.00	.00
29			23	1.2	---	88	1.4	27	.00	.01	.00	.00
30			4.6	.81	---	4.0	22	3.3	.00	.00	8.1	.00
31			4.2	22	---	1.6	---	17	---	.16	.03	---
TOTAL	---	---	---	258.54	400.27	963.92	116.76	212.96	15.77	145.20	9.95	10.46
MEAN	---	---	---	8.34	14.3	31.1	3.89	6.87	.53	4.68	.32	.35
MAX	---	---	---	166	163	456	56	74	9.1	126	8.1	4.6
MIN	---	---	---	.53	.39	.33	.15	.04	.00	.00	.00	.00
CFSM	---	---	---	2.62	4.50	9.78	1.22	2.16	.17	1.47	.10	.11
IN.	---	---	---	3.02	4.68	11.27	1.37	2.49	.18	1.70	.12	.12

07031685 FLETCHER CREEK TRIBUTARY AT CHARLES BRYAN ROAD NEAR CORDOVA, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.34	2.7	.58	.27	.21	2.2	.17	1.0	.50	.00	.00
2	.00	.27	.81	66	.16	.21	1.4	.19	1.1	.13	.00	.00
3	.00	.20	.45	13	.16	.21	1.2	.11	.95	.04	.00	41
4	.00	3.5	.21	1.6	.16	.21	.81	.02	.61	22	.00	223
5	.00	1.4	.12	.65	47	51	.63	.03	.54	.76	.00	1.4
6	.00	59	7.2	.58	4.3	1.7	.40	3.6	.31	.29	.00	.23
7	.00	3.1	1.0	4.5	1.3	.81	.31	.75	.14	.17	.00	.03
8	.00	.64	.39	1.1	.90	65	.19	.13	.08	.10	.00	.05
9	.00	4.1	.27	.33	.58	14	.11	.03	.15	.05	.00	.10
10	.00	5.5	.12	.39	.51	2.8	.08	.01	.08	.03	.00	.10
11	.00	.72	.12	3.1	.81	1.3	.06	.00	.09	.01	.00	.04
12	.00	.21	.08	1.4	.65	10	.04	.01	.03	.00	.00	.04
13	.00	.08	.04	1.7	.58	1.8	.22	.01	.00	.00	.00	.03
14	.00	.04	.04	.81	.45	1.0	.37	.51	.00	.00	.00	.02
15	.00	.02	13	.51	.39	.81	.12	.43	.00	.00	.00	.04
16	.17	.01	2.5	.45	.39	.65	.12	.43	2.0	.00	.00	.04
17	1.2	.01	.65	.21	73	.51	.07	.26	.33	.00	.00	.05
18	.22	.01	.21	.12	40	.39	.02	.24	25	.00	.00	.04
19	.04	.01	.12	.16	2.8	.39	.02	.14	2.7	.00	.00	.06
20	.01	.33	.12	.33	1.4	.33	.10	.06	.42	.00	.00	.05
21	.00	.12	.08	.21	133	.21	.32	.03	.04	.00	.00	.06
22	.00	.01	.06	.27	3.8	.12	.08	.04	.00	.00	.00	.04
23	.00	.00	.06	.27	1.4	.12	.08	.03	.03	.00	.00	.03
24	.00	.00	.04	.39	.90	.12	.84	.01	.00	.00	.00	.03
25	9.0	.00	53	11	.65	.33	1.2	.00	12	.00	.00	.03
26	.11	13	9.5	3.0	.51	10	.11	.00	.38	.00	.00	.03
27	.45	2.0	1.6	.90	.39	14	.05	.92	.06	.00	.00	12
28	.39	.27	.90	.58	.33	1.4	.07	33	.01	.00	.00	.15
29	.41	.08	1.0	.51	.27	169	.06	4.2	4.8	.00	.00	.10
30	.36	113	1.3	.45	---	32	.13	1.2	14	.00	.00	.08
31	.34	---	1.1	.33	---	9.0	---	.69	---	.00	.00	---
TOTAL	12.70	207.97	98.79	115.43	317.06	389.63	11.41	47.25	66.85	24.08	.00	278.87
MEAN	.41	6.93	3.19	3.72	10.9	12.6	.38	1.52	2.23	.78	.000	9.30
MAX	9.0	113	53	66	133	169	2.2	33	25	22	.00	223
MIN	.00	.00	.04	.12	.16	.12	.02	.00	.00	.00	.00	.00
CFSM	.13	2.18	1.00	1.17	3.43	3.96	.12	.48	.70	.25	.000	2.93
IN.	.15	2.43	1.16	1.35	3.71	4.56	.13	.55	.78	.28	.00	3.26

CAL YR 1975 TOTAL 2453.29 MEAN 6.72 MAX 456 MIN .00 CFSM 2.11 IN 28.69
WTR YR 1976 TOTAL 1570.04 MEAN 4.29 MAX 223 MIN .00 CFSM 1.35 IN 18.36

07031685 FLETCHER CREEK TRIBUTARY AT CHARLES BRYAN ROAD NEAR CORDOVA, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.11	.17	.10	.08	.30	.12	.00	.00	.00	.00	.00
2	.06	.16	.10	.10	.07	.27	25	.00	.00	.00	.00	.00
3	.04	.06	.05	.10	.10	162	17	.01	.00	.00	.00	.00
4	.02	.01	.04	.13	.10	30	62	.05	.00	.00	.00	.00
5	.16	.00	.02	.16	.10	5.9	3.4	.04	.00	.00	.00	.00
6	.32	.06	.05	.40	.10	5.9	1.1	.03	.00	.00	.00	.00
7	.05	.10	.10	.50	.10	4.7	.36	.02	.00	.00	.00	.00
8	.02	1.0	.08	.30	.12	3.9	.07	.02	.00	.00	.00	.00
9	.01	.10	.08	.60	.10	2.7	.00	.01	.00	.39	.00	.00
10	.00	.16	.10	.45	.10	1.6	.00	.01	.00	5.0	.00	.00
11	.00	.16	.20	.30	.08	7.2	.00	.00	.00	1.0	.00	.00
12	.00	.20	.25	.20	4.0	40	.00	.00	.00	.20	.00	.00
13	.00	.16	.20	.50	.86	3.4	.00	.00	2.0	.02	.00	40
14	.00	.20	.20	80	.39	2.4	.00	.00	.45	.00	73	5.0
15	.00	.28	.18	10	.18	1.6	.00	.00	.20	.00	2.0	1.0
16	.00	.16	.16	3.0	.08	1.1	.00	.00	.10	.00	1.0	.02
17	.00	.16	.14	1.0	.08	.90	.00	.00	.30	.00	.02	.00
18	.00	.17	.12	.70	.08	1.0	.00	.00	.15	.00	.00	.00
19	.00	.21	.10	.50	.07	.73	14	.00	.25	.50	.00	.00
20	.00	.35	.10	.35	.04	.65	4.5	.00	.10	5.0	.00	.00
21	.00	.25	.09	.20	.04	.58	1.2	.00	.30	1.0	.00	.00
22	.00	.17	.08	.14	.02	.51	.65	.00	.10	.20	3.0	.00
23	.00	.20	.09	.12	25	.51	77	.00	.02	.02	.50	.00
24	14	.08	.10	.14	3.3	.51	3.1	.00	.00	.00	.05	150
25	87	.02	.20	.16	1.4	.51	2.1	.00	.00	.00	.00	20
26	1.5	10	.14	.18	1.1	.27	1.0	.00	.00	.00	.00	1.0
27	.32	2.6	.13	.15	1.0	.51	.39	.00	.04	.00	.00	114
28	.16	.87	.13	.13	.46	4.3	.12	.00	.00	.00	.00	2.0
29	.13	.29	.13	.12	---	1.6	.04	.00	.00	.00	.00	39
30	2.0	.73	.12	.10	---	.73	.01	.00	.00	.00	.00	9.1
31	.38	---	.11	.09	---	.27	---	.00	---	.00	.00	---
TOTAL	106.24	19.02	3.76	100.92	39.15	286.55	213.16	.19	4.01	13.33	79.57	381.12
MEAN	3.43	.63	.12	3.26	1.40	9.24	7.11	.006	.13	.43	2.57	12.7
MAX	87	10	.25	80	25	162	77	.05	2.0	5.0	73	150
MIN	.00	.00	.02	.09	.02	.27	.00	.00	.00	.00	.00	.00
CFSM	1.08	.20	.04	1.03	.44	2.91	2.24	.002	.04	.14	.81	3.99
IN.	1.24	.22	.04	1.18	.46	3.35	2.49	.00	.05	.16	.93	4.46

CAL YR 1976 TOTAL 1379.60 MEAN 3.77 MAX 223 MIN .00 CFSM 1.19 IN 16.13
WTR YR 1977 TOTAL 1247.02 MEAN 3.42 MAX 162 MIN .00 CFSM 1.08 IN 14.58

07031777 LICK CREEK AT DICKINSON STREET AT MEMPHIS, TN

LOCATION.--Lat 35°09'24", long 90°00'12", Shelby County, Hydrologic Unit 08010210, on right bank 100 ft (30 m) upstream from bridge on Dickinson Street, and 1,200 ft (366 m) south of Jackson Avenue.

DRAINAGE AREA.--2.96 mi² (7.67 km²).

PERIOD OF RECORD.--December 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 234 ft (71 m), from topographic map.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,420 ft³/s (40.2 m³/s) Sept. 30, 1977, gage height, 11.54 ft (3.517 m); minimum, 0.10 ft³/s (0.003 m³/s) Sept. 18, 1975.

EXTREMES FOR WATER YEARS 1975-77.--Peak discharges above base of 550 ft³/s (15.6 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Dec. 24, 1974	1955	1010	28.6	9.83	2.996
Feb. 22, 1975	2210	863	24.4	9.13	2.783
Mar. 11, 1975	2055	765	21.7	8.67	2.643
Mar. 12, 1975	0425	*1110	31.4	10.26	3.127
Mar. 12, 1975	0830	1060	30.0	10.04	3.060
Mar. 28, 1975	0010	1100	31.2	10.22	3.115
Mar. 29, 1975	0200	830	23.5	8.98	2.737
Apr. 30, 1975	0505	628	17.8	7.96	2.426
May 11, 1975	1635	780	22.1	8.74	2.664
Aug. 3, 1975	1755	559	15.8	7.56	2.304
Aug. 30, 1975	0825	564	16.0	7.59	2.313
Feb. 5, 1976	1235	655	18.5	8.11	2.472
Feb. 17, 1976	1945	588	16.7	7.73	2.356
Mar. 5, 1976	0010	586	16.6	7.72	2.353
Mar. 29, 1976	1050	581	16.5	7.69	2.344
Mar. 29, 1976	1850	705	20.0	8.37	2.551
June 1, 1976	2255	*1050	29.7	9.99	3.045
June 25, 1976	0305	593	16.8	7.76	2.365
Oct. 5, 1976	1900	579	16.4	7.68	2.341
Mar. 3, 1977	1450	862	24.4	9.14	2.786
Sept. 24, 1977	1210	1060	30.0	10.03	3.057
Sept. 27, 1977	0815	770	21.8	8.70	2.652
Sept. 30, 1977	0440	*1420	40.2	11.54	3.517

Minimum discharge:

Water Year	Date	Discharge (ft³/s)	Discharge (m³/s)
1975	Sept. 18	.10	.003
1976	Oct. 3	.12	.003
1977	Aug. 16, 17	.17	.005

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	5.8	40	.28	1.2	1.4	1.2	1.7	14	.87
2			---	.60	6.2	.25	1.6	.57	.94	2.3	1.4	.84
3			---	18	9.2	.32	1.0	23	.47	2.4	25	1.0
4			5.9	.80	10	.34	1.6	1.6	.56	2.2	3.1	.58
5			6.8	.50	36	.23	.68	1.6	2.2	1.4	1.9	.79
6			10	.38	1.2	.31	.68	.79	.82	2.2	1.0	1.4
7			8.0	.25	.53	.35	.68	.72	2.1	1.6	2.1	1.4
8			6.8	11	.31	.28	4.7	4.9	.97	1.3	1.8	1.5
9			6.8	2.1	.79	17	17	1.8	1.4	2.4	1.5	11
10			6.8	6.2	.41	13	2.2	1.8	2.8	2.2	1.7	10
11			12	4.0	.41	34	2.1	69	3.6	2.2	1.6	.41
12			5.9	1.6	.41	266	.68	1.6	1.9	2.4	1.7	32
13			5.9	.44	.30	36	1.6	.79	1.7	3.5	1.9	.55
14			9.6	.70	.30	8.2	9.2	16	1.1	2.1	2.3	1.2
15			12	1.2	4.1	.65	.58	17	7.5	1.7	2.5	.49
16			1.8	.52	18	.47	.58	1.6	8.8	1.2	1.6	.59
17			1.4	.42	.88	.41	.68	.91	1.6	4.2	1.5	1.0
18			3.0	.37	.41	11	14	.35	2.7	1.7	2.3	.50
19			4.6	.72	1.3	.32	3.1	.36	2.6	1.2	1.6	25
20			5.3	.50	1.6	.88	.68	.75	2.8	3.9	1.5	5.5
21			5.7	.37	.51	.79	.68	1.1	2.6	1.5	1.4	1.0
22			6.1	.27	35	2.6	.68	.56	2.6	1.2	2.1	.87
23			9.0	.85	35	9.7	.79	.58	2.7	4.2	1.7	.36
24			123	.97	.63	.59	1.0	.58	3.2	2.1	2.5	.82
25			11	1.2	.40	.35	13	1.4	2.7	4.1	1.2	.19
26			.92	1.1	.50	.79	6.4	13	2.4	1.5	.78	.64
27			.92	.74	.49	3.2	.79	1.3	14	1.8	6.6	.14
28			.92	.43	.37	139	16	3.2	2.0	2.7	1.3	.23
29			.79	4.8	---	62	3.3	17	2.7	3.0	1.2	.06
30			.79	.64	---	2.7	19	1.3	2.3	2.2	21	.08
31			1.9	19	---	2.0	---	9.3	---	3.5	1.4	---
TOTAL	---	---	---	86.47	205.25	614.01	126.18	195.86	84.96	71.6	113.18	101.01
MEAN	---	---	---	2.79	7.33	19.8	4.21	6.32	2.83	2.31	3.65	3.37
MAX	---	---	---	19	40	266	19	69	14	4.2	25	32
MIN	---	---	---	.25	.30	.23	.58	.35	.47	1.2	.78	.06
CFSM	---	---	---	.94	2.48	6.69	1.42	2.14	.96	.78	1.23	1.14
IN.	---	---	---	1.09	2.58	7.71	1.59	2.46	1.07	.90	1.42	1.27

07031777 LICK CREEK AT DICKINSON STREET AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.80	.68	1.2	.68	1.2	1.8	.30	35	2.0	3.3	14
2	.30	.30	.58	38	.79	.64	1.2	.35	26	3.6	1.6	.80
3	.68	12	.41	2.4	.68	.68	.68	.48	.41	2.4	1.8	1.6
4	.35	13	.41	.30	.48	21	.64	1.6	1.1	18	2.0	101
5	.22	.93	.41	.35	33	39	.76	2.2	.93	2.0	2.2	2.2
6	1.6	69	15	.48	.68	.48	.79	40	.68	1.4	4.3	2.0
7	.48	1.5	.93	6.8	1.1	.41	.48	.35	1.6	2.0	2.2	1.4
8	.93	.30	.35	.68	.80	42	1.5	.26	1.4	2.7	2.0	1.8
9	.93	25	.48	.80	.68	7.2	.92	.22	1.8	2.0	2.0	4.3
10	.48	9.7	.48	.80	.58	.78	1.4	.22	2.3	2.4	1.6	.80
11	1.1	.35	.68	3.9	3.9	.53	1.8	.58	1.4	2.2	2.2	1.4
12	.80	.68	.91	.80	.68	6.4	1.2	.48	1.8	2.0	2.4	1.1
13	.93	1.2	.22	4.3	1.4	1.6	13	6.0	1.8	2.2	2.4	1.1
14	1.2	1.1	.21	.58	.80	1.4	.93	5.1	1.8	2.4	2.7	.93
15	.30	.80	19	.58	1.2	1.4	.48	5.4	1.6	2.7	3.3	2.2
16	14	.80	.58	1.1	.93	1.3	.47	5.0	17	2.2	2.4	1.8
17	2.7	.93	.48	.58	45	.68	.62	1.8	1.2	3.6	1.8	1.4
18	.58	1.4	.41	.80	5.1	.58	.41	1.8	14	3.4	2.7	1.6
19	.48	1.2	.30	.80	1.1	.58	.48	.80	1.4	2.7	2.7	5.6
20	.68	14	.30	5.1	3.3	1.1	2.0	.93	1.2	9.0	2.4	4.3
21	1.6	.68	.30	1.1	47	.90	4.6	.58	1.4	3.3	3.0	1.6
22	1.8	1.2	.30	.41	.48	.67	.60	.68	1.1	2.0	2.2	1.2
23	2.4	.80	.36	1.8	.35	.68	.35	.68	6.4	1.2	1.8	1.4
24	1.1	.68	.30	7.2	1.1	5.3	22	.58	2.4	1.8	1.8	.93
25	35	.58	31	12	.41	.80	.68	.68	80	1.4	3.7	.93
26	2.0	24	1.8	.93	.80	22	.30	13	1.0	6.9	1.2	1.4
27	1.1	1.1	.30	.79	1.4	2.4	.30	7.5	3.0	6.2	1.2	1.6
28	.80	.48	.30	.79	1.3	6.4	.68	79	19	3.0	1.8	1.8
29	.58	.68	4.3	.68	.93	85	.35	1.4	1.3	27	2.0	2.2
30	.68	68	.58	.79	---	12	.60	.83	1.2	2.4	.93	1.6
31	1.4	---	.35	.68	---	4.3	---	1.0	---	1.6	1.1	---
TOTAL	77.42	253.19	82.71	97.52	156.65	269.41	62.02	179.80	231.22	127.7	68.73	165.99
MEAN	2.50	8.44	2.67	3.15	5.40	8.69	2.07	5.80	7.71	4.12	2.22	5.53
MAX	35	69	31	38	47	85	22	79	80	27	4.3	101
MIN	.22	.30	.21	.30	.35	.41	.30	.22	.41	1.2	.93	.80
CFSM	.85	2.85	.90	1.06	1.82	2.94	.70	1.96	2.61	1.39	.75	1.87
IN.	.97	3.18	1.04	1.23	1.97	3.38	.78	2.26	2.90	1.60	.86	2.09

CAL YR 1975 TOTAL 2011.84 MEAN 5.51 MAX 266 MIN .06 CFSM 1.86 IN 25.28
WTR YR 1976 TOTAL 1772.36 MEAN 4.84 MAX 101 MIN .21 CFSM 1.64 IN 22.27

07031777 LICK CREEK AT DICKINSON STREET AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.2	5.1	1.1	1.3	.99	4.0	.76	3.2	1.0	1.5	.64
2	2.4	2.4	5.4	1.5	1.5	.85	25	.89	2.5	1.6	.99	1.3
3	2.4	2.9	5.4	3.6	1.5	80	19	2.2	1.9	1.6	1.1	.72
4	2.2	2.4	4.7	2.7	1.3	5.2	18	.71	2.4	1.4	1.3	.76
5	28	2.9	4.7	3.1	1.1	1.1	1.3	.75	2.3	1.5	1.5	1.0
6	2.0	3.5	18	19	1.5	1.0	1.8	.95	4.7	1.2	1.2	.99
7	1.6	5.7	6.1	3.0	1.8	1.0	2.4	.90	1.2	1.2	1.6	.71
8	2.0	6.4	4.1	1.5	1.7	1.3	1.6	20	1.4	1.2	1.4	1.0
9	1.8	5.1	4.7	10	2.4	.94	2.0	.63	1.3	2.6	1.2	1.1
10	1.8	5.7	4.7	1.3	1.2	1.2	2.3	.38	1.3	3.2	1.3	.78
11	2.0	6.8	23	1.0	4.3	28	2.1	.42	1.5	1.6	15	.82
12	2.4	7.5	8.8	1.3	19	7.2	1.8	.48	2.1	1.6	2.6	.90
13	2.0	7.1	5.8	22	.39	.90	1.2	.45	6.1	1.9	.66	14
14	2.4	8.9	6.2	33	.33	.44	1.2	.84	2.6	1.8	40	6.2
15	2.0	7.1	1.1	5.5	.75	.47	1.8	.47	2.2	4.3	.95	.62
16	2.7	6.8	1.2	4.3	.44	.37	2.6	.45	2.2	1.9	.41	.75
17	2.7	4.7	.88	2.3	.57	.81	1.2	.44	8.6	2.0	.60	1.3
18	2.2	4.7	.47	1.5	.58	1.8	2.7	.98	15	1.8	.78	1.0
19	6.4	6.1	.74	.92	.38	.47	18	.99	2.7	16	.96	7.1
20	8.9	8.5	1.3	1.6	.56	.54	1.0	1.2	2.1	3.2	.26	1.1
21	2.0	6.1	1.3	1.1	.49	.61	.94	1.4	1.8	1.7	.32	1.1
22	1.8	5.4	1.6	.40	2.0	.75	2.9	1.6	1.8	2.7	.60	1.3
23	14	4.7	1.1	1.5	26	.88	13	1.4	1.5	2.3	.66	1.3
24	35	5.1	1.4	4.4	.96	.86	7.8	1.8	2.2	2.3	.63	121
25	49	5.4	15	1.1	.48	1.1	.60	9.3	2.1	2.2	.88	2.5
26	3.0	37	1.3	.53	5.0	1.1	.49	1.3	7.3	2.1	.91	1.6
27	2.9	4.4	1.1	1.1	1.2	5.2	1.7	1.1	4.8	1.8	.51	41
28	2.9	7.5	1.3	.59	1.4	8.5	.92	1.5	1.2	1.8	.60	1.3
29	11	4.7	1.3	1.1	---	.50	.70	2.0	1.3	9.6	3.0	24
30	16	4.7	3.6	.74	---	.62	.76	1.6	1.1	1.6	.74	188
31	2.9	---	.70	1.3	---	.97	---	1.7	---	1.7	.70	---
TOTAL	220.6	192.4	142.09	134.08	80.13	155.67	140.81	59.59	92.4	82.4	84.86	425.89
MEAN	7.12	6.41	4.58	4.33	2.86	5.02	4.69	1.92	3.08	2.66	2.74	14.2
MAX	49	37	23	33	26	80	25	20	15	16	40	188
MIN	1.6	2.2	.47	.40	.33	.37	.49	.38	1.1	1.0	.26	.62
CFSM	2.41	2.17	1.55	1.46	.97	1.70	1.58	.65	1.04	.90	.93	4.80
IN.	2.77	2.42	1.79	1.68	1.01	1.96	1.77	.75	1.16	1.04	1.07	5.35

CAL YR 1976 TOTAL 1873.74 MEAN 5.12 MAX 101 MIN .22 CFSM 1.73 IN 23.54
WTR YR 1977 TOTAL 1810.92 MEAN 4.96 MAX 188 MIN .26 CFSM 1.68 IN 22.75

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN
(National stream-quality accounting and pesticide station)

LOCATION.--Lat 35°07'37", long 90°04'25", Shelby County, Hydrologic Unit 08010100, on left bank 50 ft (15 m) downstream from Harahan Bridge at Memphis, 1.3 mi (2.1 km) downstream from Beale Street gage, 3.5 mi (5.6 km) downstream from Wolf River, 62.4 mi (100.4 km) upstream from St. Francis River, and at mile 734.8 (1,182.3 km).

DRAINAGE AREA.--932,800 mi^2 (2,416,000 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: January 1933 to current year. Monthly discharge only for some periods, published in WSP 1311.
Gage heights: October 1934 to September 1951 and October 1952 to current year in reports of Geological Survey. Since November 1871, at Beale Street gage, in reports of Mississippi River Commission, December 1890 to August 1932 at Beale Street gage, September 1932 to December 1934 at nonrecording gage 1,000 ft (305 m) downstream, and since December 1934 at water-stage recorder at present site, in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 183.91 ft (56.056 m) above mean sea level. Prior to Apr. 16, 1934, Beale Street nonrecording gage 1.3 mi (2.1 km) upstream at present datum. Apr. 16 to Dec. 21, 1934, nonrecording gage 1,000 ft (305 m) downstream at present datum.

REMARKS.--Flow regulated by many locks, dams, and reservoirs upstream.

COOPERATION.--Records furnished by Corps of Engineers.

AVERAGE DISCHARGE.--44 years, 467,700 ft^3/s (13,200 m^3/s), 338,800,000 acre-ft/yr (418 km^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980,000 ft^3/s (56,100 m^3/s) Feb. 8, 1937; maximum gage height, 48.69 ft (14.841 m) Feb. 10, 1937; minimum discharge, 79,200 ft^3/s (2,240 m^3/s) Aug. 26, 1936; minimum gage height, -5.70 ft (-1.737 m) Sept. 21, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1937, 46.55 ft (14.188 m) Apr. 9, 1913, at Beale Street gage or about 45.2 ft (13.78 m) at present site.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 893,000 ft^3/s (25,300 m^3/s) Apr. 15, gage height, 24.70 ft (7.529 m); minimum daily, 142,000 ft^3/s (4,020 m^3/s) Feb. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165000	307000	198000	220000	189000	378000	641000	407000	229000	363000	234000	287000
2	191000	320000	203000	221000	183000	456000	666000	414000	208000	384000	231000	265000
3	199000	334000	216000	201000	177000	539000	678000	409000	204000	399000	222000	251000
4	205000	345000	221000	196000	162000	641000	671000	405000	196000	403000	202000	245000
5	195000	351000	221000	196000	151000	657000	657000	403000	195000	389000	186000	248000
6	192000	348000	219000	195000	142000	678000	634000	405000	187000	376000	176000	248000
7	197000	348000	220000	195000	144000	714000	635000	409000	184000	374000	174000	250000
8	199000	345000	214000	199000	150000	745000	668000	407000	184000	366000	169000	256000
9	192000	337000	210000	199000	153000	767000	727000	401000	187000	348000	161000	280000
10	182000	323000	208000	204000	147000	777000	780000	402000	188000	329000	152000	306000
11	178000	305000	218000	212000	142000	784000	827000	430000	188000	315000	154000	328000
12	167000	277000	247000	217000	146000	794000	861000	465000	190000	302000	172000	337000
13	174000	255000	272000	215000	148000	789000	879000	486000	190000	293000	212000	333000
14	190000	235000	299000	213000	148000	775000	868000	492000	187000	289000	262000	327000
15	218000	223000	264000	211000	154000	779000	893000	483000	190000	291000	310000	313000
16	238000	220000	342000	212000	170000	787000	890000	458000	205000	293000	332000	300000
17	280000	209000	344000	219000	197000	794000	874000	425000	221000	286000	350000	290000
18	337000	202000	331000	229000	235000	794000	845000	389000	220000	282000	366000	296000
19	361000	194000	313000	235000	274000	785000	796000	361000	201000	286000	388000	337000
20	359000	191000	301000	240000	293000	773000	719000	339000	187000	291000	409000	405000
21	332000	183000	287000	240000	311000	749000	613000	319000	171000	269000	422000	447000
22	284000	180000	278000	238000	318000	729000	515000	304000	174000	249000	420000	456000
23	247000	178000	263000	242000	298000	694000	444000	292000	183000	222000	401000	457000
24	227000	183000	249000	235000	287000	656000	397000	281000	195000	214000	376000	449000
25	219000	184000	242000	232000	280000	617000	362000	270000	200000	219000	352000	457000
26	220000	172000	234000	232000	272000	591000	354000	256000	200000	231000	323000	444000
27	224000	179000	229000	233000	280000	569000	370000	241000	223000	234000	295000	439000
28	239000	184000	222000	228000	314000	555000	389000	251000	260000	233000	281000	431000
29	266000	190000	214000	220000	---	534000	399000	251000	294000	233000	290000	421000
30	283000	200000	209000	211000	---	552000	403000	250000	330000	234000	297000	422000
31	292000	---	209000	205000	---	606000	---	243000	---	233000	292000	---
TOTAL	7252000	7502000	7697000	6745000	5865000	21058000	19475000	11348000	6171000	9230000	8611000	10325000
MEAN	233900	250100	248300	217600	209500	679300	649200	366100	205700	297700	277800	344200
MAX	361000	351000	344000	242000	318000	794000	893000	492000	330000	403000	422000	457000
MIN	165000	172000	198000	195000	142000	378000	354000	241000	171000	214000	152000	245000
AC-FT	14380000	14880000	15270000	13380000	11630000	41770000	38630000	22510000	12240000	18310000	17080000	20480000

CAL YR 1976 TOTAL 139854000 MEAN 382100 MAX 860000 MIN 138000 AC-FT 277400000
WTR YR 1977 TOTAL 121279000 MEAN 332300 MAX 893000 MIN 142000 AC-FT 240600000

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1973 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: February 1973 to current year.
WATER TEMPERATURES: February 1973 to current year.

COOPERATION.--Pesticide samples were collected by the U.S. Geological Survey and were analyzed by the Environmental Protection Agency.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 571 micromhos July 30, 1977; minimum, 239 micromhos Mar. 15, 1975.
WATER TEMPERATURES: Maximum, 31.5°C July 24, 1977; minimum, 2.0°C Jan. 4, 12, 1974, Jan. 17, 18, 19, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 571 micromhos July 30; minimum, 292 micromhos Feb. 21, 25, 27, Mar. 1, 15.
WATER TEMPERATURES: Maximum, 31.5°C July 24; minimum 2.0°C Jan. 17, 18, 19.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	FECAL COLIFORM, M-FC (COL./100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
OCT												
22...	0930	430	7.6	15.5	--	--	900	B15	150	70	41	12
NOV												
16...	1000	369	7.8	8.0	--	--	B120	--	140	39	35	12
DEC												
20...	1400	385	7.3	6.0	--	--	800	64	140	45	36	11
JAN												
26...	1030	332	7.4	2.0	--	--	--	440	120	38	35	9.1
FEB												
23...	0845	450	7.8	6.0	--	--	B130	B48	150	48	40	12
MAR												
22...	1000	275	7.2	10.0	7.0	76	B33	B32	100	33	29	7.4
APR												
20...	0845	295	7.7	18.0	--	--	B78	B40	110	37	29	8.5
MAY												
17...	1500	390	7.5	22.0	7.0	82	470	B40	140	52	39	11
JUN												
15...	1100	403	7.8	25.0	6.6	81	1100	520	160	46	43	13
JUL												
13...	0900	369	8.0	29.0	6.4	84	B400	B30	140	39	37	11
AUG												
09...	1045	468	8.1	28.0	--	--	B170	<20	160	52	42	13
24...	0930	419	7.8	27.5	6.2	79	550	B180	140	62	39	11
SEP												
22...	0845	335	7.8	22.5	6.2	73	2200	2000	130	28	35	9.4

DATE	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)
OCT												
22...	28	28	1.0	3.5	100	0	82	4.0	85	27	.3	4.0
NOV												
16...	22	25	.8	3.1	119	0	98	3.0	64	18	.2	5.3
DEC												
20...	22	26	.8	2.7	110	0	90	8.8	64	20	.2	4.6
JAN												
26...	15	20	.6	2.1	106	0	87	6.8	45	15	.2	4.0
FEB												
23...	24	25	.9	3.1	124	0	102	3.1	67	30	.1	4.7
MAR												
22...	10	17	.4	2.5	85	0	70	8.6	41	13	.2	5.2
APR												
20...	11	18	.5	2.6	86	0	71	2.7	47	12	.1	5.3
MAY												
17...	16	19	.6	3.0	110	0	90	5.6	62	18	.2	5.2
JUN												
15...	21	22	.7	4.0	140	0	110	3.6	64	15	.4	5.4
JUL												
13...	18	22	.7	3.4	120	0	98	1.9	57	12	.3	4.0
AUG												
09...	25	25	.9	3.6	130	0	110	1.7	82	22	.3	1.7
24...	22	25	.8	3.6	98	0	80	2.5	71	22	.3	3.8
SEP												
22...	15	20	.6	4.2	120	0	98	3.0	43	10	.2	5.9

B--Results based on colony count outside the acceptable range (non-ideal colony count).

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (NO3) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	SUS-PENDED ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)
OCT												
22...	259	250	.35	1.4	.66	2.1	9.1	.28	2	0	2	<10
NOV												
16...	215	218	.29	.82	.46	1.3	5.7	.16	--	--	--	--
DEC												
20...	244	215	.33	.78	.86	1.7	7.5	.19	--	--	--	--
JAN												
26...	195	178	.27	.56	.67	1.2	5.4	.09	2	1	1	<10
FEB												
23...	254	242	.35	.82	1.2	2.0	8.9	.25	--	--	--	--
MAR												
22...	168	150	.23	1.2	.93	2.1	9.4	.30	--	--	--	--
APR												
20...	178	158	.24	1.1	.56	1.7	7.3	.07	--	--	0	<10
MAY												
17...	214	209	.29	1.5	1.0	2.5	11	.20	--	--	--	--
JUN												
15...	242	235	.33	.95	.89	1.8	8.1	.33	--	--	--	--
JUL												
13...	204	202	.28	.90	.63	1.5	6.8	.22	--	--	1	10
AUG												
09...	269	254	.37	.38	.88	1.3	5.6	.16	--	--	--	--
24...	232	221	.32	1.3	.77	2.1	9.2	.24	--	--	--	--
SEP												
22...	193	182	.26	1.1	1.8	2.9	13	.55	--	--	--	--

DATE	SUS-PENDED CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	SUS-PENDED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	SUS-PENDED COBALT (CU) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	SUS-PENDED COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
OCT											
22...	<10	0	10	10	0	<50	<49	1	60	51	9
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
26...	<10	0	0	0	0	<50	<50	0	70	62	8
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	1	<10	--	0	<50	--	1	40	--	5
MAY											
17...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	9	1	0	--	0	<50	<50	0	70	59	11
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	--	--	--	--	--	--	--	--	--	--	--

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	SUS-PENDED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	SUS-PENDED MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	SUS-PENDED MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)
OCT											
22...	5500	20	<100	<99	410	410	0	.0	.0	.0	1
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
26...	930	30	<100	<98	70	40	30	.2	.0	.2	0
FEB											
23...	--	--	--	--	--	--	--	--	--	--	--
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	5100	30	<100	--	310	300	10	--	--	.0	1
MAY											
17...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	4800	20	<100	<99	250	--	40	--	--	.1	1
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	SUS-PENDED SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	SUS-PENDED ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ATRA-ZINE (UG/L)	ATRA-ZINE IN BOTTOM MATERI-AL (UG/ KG DRY SOLIDS)	TOTAL CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM MA-TERIAL (UG/KG)
OCT												
22...	0	1	70	60	10	6.4	--	--	--	--	--	--
NOV												
16...	--	--	--	--	--	--	ND	ND	ND	ND	ND	ND
DEC												
20...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
26...	0	0	40	20	20	2.6	--	--	--	--	--	--
FEB												
23...	--	--	--	--	--	--	ND	--	ND	--	ND	--
MAR												
22...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
20...	--	0	60	50	10	6.3	--	--	--	--	--	--
MAY												
17...	--	--	--	--	--	--	ND	ND	2.8	ND	ND	0
JUN												
15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
13...	1	0	50	50	4	6.7	--	--	--	--	--	--
AUG												
09...	--	--	--	--	--	5.8	--	--	--	--	--	--
24...	--	--	--	--	--	6.6	--	--	--	--	--	--
SEP												
22...	--	--	--	--	--	14	--	--	--	--	--	--

ND--Material specifically analyzed for but not detected.

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DEC											
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
26...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	--	--	--	--	--	--	--	--	--	--
MAY											
17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)
OCT											
22...	--	--	--	--	--	--	--	--	--	--	--
NOV											
16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DEC											
20...	--	--	--	--	--	--	--	--	--	--	--
JAN											
26...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAR											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
20...	--	--	--	--	--	--	--	--	--	--	--
MAY											
17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN											
15...	--	--	--	--	--	--	--	--	--	--	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
SEP											
22...	--	--	--	--	--	--	--	--	--	--	--

ND--Material specifically analyzed for but not detected.

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TOTAL METH-OXY-CHLOR (UG/L)	METHOX-YCHLOR IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL METHYL PARA-THION (UG/L)	METHYL PARA-THION IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL METHYL TRI-THION (UG/L)	METHYL TRI-THION IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL PARA-THION (UG/L)	PARA-THION IN BOTTOM MA-TERIAL (UG/KG)	SIMA-ZINE TOTAL COUL-SON COND. (UG/L)	SIMA-ZINE IN BOTTOM MATERI-AL (UG/KG DRY SOLIDS)	TOTAL TOX-APHENE (UG/L)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
DEC 20...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAR 22...	--	--	--	--	--	--	--	--	--	--	--
APR 20...	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
SEP 22...	--	--	--	--	--	--	--	--	--	--	--

DATE	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TRI-THION IN BOTTOM MA-TERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MA-TERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MA-TERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MA-TERIAL (UG/KG)	SUS-PENDED SEDI-MENT (MG/L)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT 22...	--	--	--	--	--	--	--	--	--	163	94
NOV 16...	ND	ND	ND	ND	ND	ND	ND	ND	ND	60	88
DEC 20...	--	--	--	--	--	--	--	--	--	91	83
JAN 26...	--	--	--	--	--	--	--	--	--	45	88
FEB 23...	--	ND	--	ND	--	ND	--	ND	--	87	93
MAR 22...	--	--	--	--	--	--	--	--	--	207	90
APR 20...	--	--	--	--	--	--	--	--	--	159	98
MAY 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	191	98
JUN 15...	--	--	--	--	--	--	--	--	--	277	98
JUL 13...	--	--	--	--	--	--	--	--	--	180	99
AUG 09...	--	--	--	--	--	--	--	--	--	79	97
24...	--	--	--	--	--	--	--	--	--	182	93
SEP 22...	--	--	--	--	--	--	--	--	--	658	98

ND--Material specifically analyzed for but not detected.

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	382	415	412	374	292	303	356	442	387	434	403
2	383	383	411	410	377	294	304	353	443	353	439	406
3	382	382	411	411	394	294	306	---	432	355	472	407
4	381	381	411	407	395	296	303	---	428	359	471	406
5	380	381	412	412	394	295	353	---	425	---	471	405
6	383	382	411	410	394	296	353	---	443	---	475	405
7	382	381	416	411	396	294	353	---	444	---	476	407
8	381	382	412	381	430	294	352	---	432	---	447	429
9	380	380	416	381	316	294	352	---	437	---	447	442
10	381	383	416	377	431	295	352	---	451	---	451	355
11	380	388	416	377	432	293	352	---	444	362	461	355
12	383	388	390	377	432	294	352	---	448	362	477	355
13	383	385	390	377	434	294	352	---	452	366	470	355
14	381	386	386	377	432	294	354	---	430	375	471	359
15	382	411	390	377	433	292	352	---	410	381	471	355
16	384	416	389	381	431	294	357	---	413	414	479	381
17	383	412	389	381	432	293	354	---	413	415	439	382
18	382	412	389	381	433	294	353	---	410	414	428	382
19	382	404	392	377	431	293	353	---	408	415	428	382
20	379	416	---	377	431	294	350	---	395	414	441	384
21	381	414	406	377	292	294	352	---	401	413	436	321
22	382	413	408	381	293	294	354	---	415	408	438	320
23	380	414	408	379	293	293	354	---	439	399	370	329
24	381	414	408	377	293	303	354	---	410	399	370	329
25	382	418	409	381	292	304	352	---	418	424	370	328
26	378	416	410	377	293	305	354	---	429	424	370	328
27	380	412	411	378	292	303	354	---	448	424	370	355
28	382	411	409	377	293	304	356	---	450	424	370	354
29	380	414	407	379	---	303	353	---	423	424	371	356
30	381	411	412	378	---	302	356	---	449	571	371	385
31	381	---	407	381	---	302	---	---	---	555	371	---
MEAN	381	399	405	386	377	296	347		429	409	431	372

WTR YR 1977 MEAN 384 MAX 571 MIN 292

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.0	20.0	---	5.0	5.0		15.0	25.0	27.0	28.0	29.0	29.0
2	15.0	20.0	15.0	5.0	5.0		16.0	25.0	26.0	28.0	29.0	28.0
3	15.0	21.0	15.0	5.0	3.0		16.0	---	26.5	29.0	27.5	28.5
4	17.0	21.0	15.0	5.0	3.0		14.0	---	27.5	28.0	28.5	28.0
5	20.0	21.0	15.0	5.0	3.0		25.0	---	29.0	---	28.0	28.0
6	15.0	23.0	10.0	5.0	3.0		24.0	---	26.5	---	29.0	29.5
7	16.0	23.0	10.0	5.0	3.0		22.0	---	25.5	---	29.0	28.5
8	20.0	21.0	10.0	5.0	4.0		23.0	---	26.0	---	29.0	28.0
9	20.0	23.0	12.0	5.0	4.0		25.0	---	25.5	---	28.5	27.5
10	18.0	15.0	10.0	5.0	4.0		25.0	---	26.0	---	29.5	26.0
11	25.0	10.0	8.0	3.0	4.0		25.0	---	26.5	29.5	28.5	26.5
12	25.0	8.0	5.0	3.0	4.0		24.0	---	26.5	30.0	29.0	26.0
13	25.0	8.0	5.0	3.0	5.0		25.0	---	26.5	29.0	29.5	26.0
14	26.0	8.0	5.0	3.0	5.0		25.0	---	26.0	29.5	28.0	25.5
15	25.0	10.0	5.0	3.0	4.0		25.0	---	26.0	30.0	28.0	25.0
16	24.0	10.0	5.0	3.0	4.0		22.0	---	26.5	30.0	27.5	25.0
17	26.0	10.0	5.0	2.0	4.0		21.0	---	26.0	30.0	28.0	25.0
18	24.0	---	5.0	2.0	4.0		25.0	---	26.5	29.5	27.5	26.5
19	20.0	---	5.0	2.0	4.0		24.0	---	27.0	30.5	28.0	26.0
20	19.0	---	---	3.0	5.0		24.0	---	27.5	30.5	28.0	25.0
21	22.0	---	---	3.0	5.0		24.0	---	28.0	30.0	28.5	23.5
22	24.0	---	5.0	3.0	5.0		24.0	---	27.0	31.0	28.0	24.0
23	22.0	---	5.0	3.0	5.0		25.0	---	27.5	31.0	29.5	23.0
24	24.0	---	5.0	3.0	5.0		25.0	---	28.0	31.5	29.0	24.5
25	25.0	---	5.0	5.0	4.0		25.0	---	28.5	29.5	27.0	24.0
26	24.0	---	5.0	5.0	5.0		25.0	---	27.5	30.0	28.5	23.5
27	20.0	---	5.0	5.0	5.0		25.0	---	26.5	29.5	28.0	21.0
28	23.0	---	5.0	5.0	5.0		25.0	---	27.0	28.5	27.5	22.0
29	24.0	---	5.0	5.0	---		25.0	---	27.5	29.0	28.0	21.5
30	25.0	---	5.0	5.0	---		25.0	---	27.5	29.5	28.0	23.0
31	23.0	---	5.0	5.0	---		---	---	---	29.0	28.5	---
MEAN	21.5		7.5	4.0	4.5		23.0		27.0	29.5	28.5	25.5

WTR YR 1977 MEAN 19.0 MAX 31.5 MIN 2.0

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	OCT 22,76		NOV 16,76		DEC 20,76		JAN 26,77		FEB 23,77	
TIME	0930		1000		1400		1030		0845	
TOTAL CELLS/ML	12000		7400		4000		7100		6300	
DIVERSITY: DIVISION	1.4		1.4		1.4		0.4		0.6	
.CLASS	1.4		1.4		1.4		0.4		0.6	
..ORDER	1.7		2.2		1.4		0.9		1.2	
...FAMILY	2.2		2.4		1.5		1.0		1.2	
....GENUS	3.0		2.7		2.0		1.1		1.9	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	83	2	--	-	--	-
...COELASTRACEAE										
....COELASTRUM	--	-	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	--	-
...MICRACTINIACEAE										
....GOLENKINIA	--	-	*	0	--	-	50	1	--	-
....MICRACTINIUM	--	-	--	-	62	2	--	-	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	100	1	230	4
....CHODATELLA	190	2	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	*	0	--	-	--	-	--	-	620	10
....NEPHROCYTIUM	--	-	--	-	--	-	--	-	--	-
....OOCYSTIS	190	2	260	4	--	-	--	-	--	-
....WESTELLA	760	7	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	760	7	--	-	--	-	--	-	--	-
....CRUCIGENIA	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	2100#	18	260	4	170	4	--	-	--	-
....TETRASTRUM	2300#	20	130	2	--	-	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
....FLAKATOTHRIX	--	-	--	-	--	-	--	-	--	-
...TETRASPORACEAE										
....TETRASPORA	--	-	130	2	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	*	0	--	-	150	2	78	1
...VOLVOCACEAE										
....GONIUM	--	-	--	-	--	-	--	-	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	*	0	--	-	--	-	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	2600#	23	990	13	1600#	40	5900#	83	3900#	62
....MELOSIRA	--	-	1100#	15	560	14	50	1	620	10
....STEPHANODISCUS	--	-	--	-	21	1	--	-	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	--	-	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	*	0	--	-	--	-	--	-
....EPITHEMIA	--	-	--	-	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	--	-	*	0	--	-	--	-	--	-
....OPEPHORA	--	-	--	-	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	700	10	580	9
....FRAGILARIA	190	2	490	7	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-	--	-	190	3
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	--	-	--	-	--	-
...NAVICULACEAE										
....CALONEIS	--	-	--	-	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	--	-	--	-
....NAVICULA	570	5	66	1	--	-	--	-	--	-
....PINNULARIA	--	-	--	-	--	-	--	-	--	-
...NITZSCHIACEAE										
....HANTZSCHIA	--	-	--	-	--	-	--	-	--	-
....NITZSCHIA	--	-	130	2	--	-	50	1	*	0
...SURIRELLACEAE										
....SURIRELLA	380	3	*	0	--	-	--	-	39	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	OCT 22,76		NOV 16,76		DEC 20,76		JAN 26,77		FEB 23,77	
TIME	0930		1000		1400		1030		0845	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	590	8	--	-	--	-	--	-
....COCCOCHLORIS	--	-	*	0	--	-	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE										
....OSCILLATORIA	1500	13	3100#	42	1500#	36	50	1	--	-
...RIVULARIACEAE										
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	*	0	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	50	1	*	0
....PHACUS	--	-	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	83	2	50	1	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...PERIDINIACEAE										
....PERIDINIUM	--	-	*	0	--	-	--	-	--	-

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE	MAY 17.77		JUN 15.77		JUL 13.77		AUG 24.77		SEP 22.77	
TIME	1500		1100		0900		0930		0845	
TOTAL CELLS/ML	3300		2900		4400		5900		2200	
DIVERSITY: DIVISION	1.3		1.3		1.4		1.2		1.3	
.CLASS	1.3		1.3		1.4		1.2		1.3	
..ORDER	1.6		1.7		2.0		1.8		1.6	
...FAMILY	2.1		2.5		2.2		2.5		1.7	
....GENUS	2.9		3.1		2.7		2.8		2.1	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...CHARACIACEAE										
....SCHROEDERIA	--	-	*	0	--	-	--	-	--	-
...COELASTRACEAE										
....COELASTRUM	--	-	310	11	--	-	200	3	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	190	6	66	2	--	-	--	-	--	-
...MICRACTINIACEAE										
....GOLENKINIA	--	-	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-	51	1	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	28	1	25	1	*	0	*	0	29	1
....CHODATELLA	--	-	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	57	2	--	-	--	-	51	1	--	-
....NEPHROCYTIUM	--	-	--	-	220	5	--	-	--	-
....OOCYSTIS	--	-	74	3	54	1	--	-	--	-
....WESTELLA	--	-	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....ACTINASTRUM	57	2	66	2	--	-	76	1	100	5
....CRUCIGENIA	230	7	33	1	54	1	--	-	--	-
....SCENEDESMUS	510#	16	630#	22	270	6	230	4	29	1
....TETRASTRUM	57	2	--	-	--	-	--	-	--	-
..TETRASPORALES										
...COCCOMYXACEAE										
....ELAKATOTHRIX	--	-	17	1	--	-	--	-	--	-
...TETRASPORACEAE										
....TETRASPORA	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-	--	-
...VOLVOCACEAE										
....GONIUM	--	-	--	-	--	-	200	3	--	-
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	--	-	--	-	--	-	*	0	--	-
CHRYSOPHYTA										
.BACILLAPIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	270	8	460#	16	650	15	380	6	150	7
....MELOSIRA	1400#	42	720#	25	1000#	24	370	6	850#	38
....STEPHANODISCUS	--	-	17	1	--	-	*	0	--	-
..PENNALES										
...ACHNANTHACEAE										
....COCCONEIS	*	0	--	-	--	-	--	-	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	--	-	--	-	15	1
....EPITHEMIA	--	-	*	0	--	-	--	-	--	-
...DIATOMACEAE										
....DIATOMA	*	0	--	-	--	-	--	-	--	-
....OPEPHORA	--	-	17	1	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	--	-	--	-	--	-	--	-	--	-
....FRAGILARIA	43	1	170	6	430	10	--	-	--	-
....SYNEDRA	--	-	*	0	*	0	51	1	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	*	0	--	-	--	-	--	-	29	1
...NAVICULACEAE										
....CALONEIS	--	-	*	0	--	-	--	-	--	-
....GYROSIGMA	--	-	--	-	--	-	*	0	44	2
....NAVICULA	*	0	*	0	--	-	*	0	--	-
....PINNULARIA	--	-	*	0	--	-	--	-	--	-
...NITZSCHIACEAE										
....HANTZSCHIA	--	-	--	-	*	0	*	0	--	-
....NITZSCHIA	85	3	74	3	150	3	--	-	29	1
...SURIRELLACEAE										
....SURIRELLA	28	1	--	-	--	-	--	-	--	-

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

PHYTOPLANKTON

DATE TIME	MAY 17,77 1500		JUN 15,77 1100		JUL 13,77 0900		AUG 24,77 0930		SEP 22,77 0845	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROCCOCCALES										
...CHROCCOCCACEAE										
....AGMENELLUM	--	-	--	-	--	-	460	8	--	-
....ANACYSTIS	--	-	--	-	81	2	51	1	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-	--	-
..HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	--	-	--	-	870	15	--	-
...OSCILLATORIACEAE										
....OSCILLATORIA	270	8	150	5	1400#	31	2700#	46	940#	42
...RIVULARIACEAE										
....RAPHIDIOPSIS	--	-	--	-	--	-	63	1	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.CRYPTOPHYCEAE										
..CRYPTOMONIDALES										
...CRYPTOMONODACEAE										
....CRYPTOMONAS	--	-	--	-	--	-	--	-	--	-
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	--	-	*	0	*	0	--	-	--	-
....PHACUS	--	-	--	-	--	-	--	-	15	1
....TRACHELOMONAS	*	0	--	-	--	-	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..PERIDINIALES										
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	--	-	--	-

07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN

LOCATION.--Lat 35°02'59", long 89°49'08", Shelby County, Hydrologic Unit 08010211, on left bank at downstream side of bridge on Winchester Road, 1.6 mi (4.2 km) south of Germantown, and 17.3 mi (27.8 km) upstream from mouth.

DRAINAGE AREA.--68.2 mi^2 (176.6 km^2).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-1964, 1969; October 1969 to current year.

REVISED RECORDS.--WRD TN 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 262.92 ft (80.138 m) above mean sea level (levels by Soil Conservation Service).

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--8 years, 97.5 ft^3/s (2.76 m^3/s), 19.41 in/yr (493 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,680 ft^3/s (274 m^3/s) Mar. 12, 1975, gage height, 27.11 ft (8.263 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (71 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 14	0700	2680	75.9	14.15	4.313	June 26	1715	2610	73.9	13.95	4.252
Mar. 3	2300	5480	155	20.30	6.187	Sept. 24	1530	*5820	165	20.95	6.386
Apr. 4	0445	2740	77.6	14.34	4.371						

No flow June 24, 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	2.9	2.3	1.5	1.7	8.5	7.0	4.3	.46	.07	1.5	.05
2	.05	1.5	1.4	.95	1.5	6.2	123	4.3	.25	.07	.18	.05
3	.05	1.1	1.2	.76	1.5	1540	340	139	.12	.05	.07	.05
4	.04	.76	.85	.95	1.9	2100	1480	344	.12	.05	.05	.04
5	.10	.85	.60	1.7	2.1	311	308	25	.12	.04	.04	.05
6	.40	.60	2.9	192	1.5	65	66	7.9	.15	.04	.04	.05
7	.25	.30	5.6	166	1.4	33	29	3.6	.12	.03	.04	2.1
8	.10	.18	4.3	39	.95	21	17	3.6	.08	.02	.04	.05
9	.06	.22	2.1	229	.95	16	12	1.9	.06	340	.04	.05
10	.05	.22	1.5	101	1.1	14	9.8	.60	.06	72	.04	.05
11	.05	.22	2.9	20	1.2	27	8.2	3.6	.07	1.4	.03	.05
12	.05	.22	4.0	7.6	19	875	6.7	.85	.05	.12	14	.05
13	.04	.22	4.3	28	15	131	6.7	.46	68	.05	.35	157
14	.04	.22	2.9	1630	8.8	43	6.7	.40	6.4	7.0	11	173
15	.04	.30	2.3	271	7.0	23	6.4	.30	4.9	13	42	55
16	.03	.30	1.7	70	5.1	15	6.2	.22	2.3	.35	26	34
17	.03	.25	1.4	25	4.0	12	5.6	.22	3.1	.07	1.5	1.9
18	.04	.25	1.1	9.1	3.3	11	5.6	.22	47	.04	.22	.40
19	.04	.25	.85	4.6	2.9	9.5	11	.15	7.0	.30	.06	.18
20	.60	.40	.68	3.3	2.5	8.5	17	.18	.30	4.9	.04	.12
21	.53	.46	.60	3.1	2.1	7.9	8.5	.18	.05	.53	.04	.07
22	.18	.40	.46	2.7	1.5	7.9	9.1	.18	.02	.08	6.2	.05
23	.15	.40	.40	1.9	394	7.0	12	.18	.02	3.1	14	.05
24	183	.35	.40	13	297	7.3	11	.18	.00	56	3.3	2380
25	844	.25	5.4	46	49	6.7	9.5	.85	.00	18	.07	781
26	69	410	5.4	24	21	6.7	6.7	.46	370	7.6	.06	75
27	8.2	123	2.5	18	19	7.3	5.6	.15	77	.40	.04	506
28	2.7	38	2.7	14	12	23	5.1	.15	2.1	.12	.04	139
29	2.5	12	2.3	9.1	---	16	4.6	.22	.40	.06	.04	240
30	26	4.3	1.9	3.8	---	11	4.6	.22	.12	.05	.30	176
31	6.7	---	2.7	2.5	---	7.3	---	.25	---	.95	.15	---
TOTAL	1145.08	600.42	69.64	2939.56	879.00	5377.8	2548.6	543.82	590.37	526.49	121.48	4721.41
MEAN	36.9	20.0	2.25	94.8	31.4	173	85.0	17.5	19.7	17.0	3.92	157
MAX	844	410	5.6	1630	394	2100	1480	344	370	340	42	2380
MIN	.03	.18	.40	.76	.95	6.2	4.6	.15	.00	.02	.03	.04
CFSM	.54	.29	.03	1.39	.46	2.54	1.25	.26	.29	.25	.06	2.30
IN.	.62	.33	.04	1.60	.48	2.93	1.39	.30	.32	.29	.07	2.58

CAL YR 1976 TOTAL 24191.53 MEAN 66.1 MAX 1640 MIN .00 CFSM .97 IN 13.20
WTR YR 1977 TOTAL 20063.67 MEAN 55.0 MAX 2380 MIN .00 CFSM .81 IN 10.94

07032222 JOHNS CREEK TRIBUTARY AT HOLMES ROAD NEAR MEMPHIS, TN

LOCATION.--Lat 35°00'20", long 89°52'16", Shelby County, Hydrologic Unit 08010211, on left bank at upstream side of bridge at Holmes Road, 1,200 ft (366 m) east of St. Louis-San Francisco Railroad, and 2.0 mi (3.2 km) east of U.S. Highway 78.

DRAINAGE AREA.--5.83 mi^2 (15.10 km^2).

PERIOD OF RECORD.--March 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 304 ft (93 m), from topographic map.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) Mar. 28, 1975, gage height, 10.42 ft (3.176 m); minimum, 0.04 ft^3/s (0.001 m^3/s) Nov. 1, 4, 1976.

EXTREMES FOR WATER YEARS 1975-77.--Peak discharges above base of 500 ft^3/s (14.2 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 28, 1975	2340	*1530	43.3	10.42	3.176	Mar. 29, 1976	2300	*1070	30.3	7.69	2.344
May 11, 1975	1850	544	15.4	4.72	1.439	June 18, 1976	1330	828	23.4	6.29	1.917
May 14, 1975	2345	594	16.8	4.99	1.521	June 25, 1976	0605	710	20.1	5.61	1.710
July 2, 1975	1635	535	15.2	4.68	1.426	June 27, 1976	1905	777	22.0	6.00	1.829
Nov. 30, 1975	0945	763	21.6	5.92	1.804	Oct. 25, 1976	0620	542	15.3	4.71	1.436
Feb. 5, 1976	1405	946	26.8	6.98	2.128	Mar. 3, 1977	1730	1040	29.5	7.52	2.292
Feb. 17, 1976	2225	691	19.6	5.51	1.679	June 26, 1977	1630	*1210	34.3	8.53	2.600
Feb. 21, 1976	0825	693	19.6	5.52	1.682	Sept. 24, 1977		Unknown		Unknown	
Mar. 5, 1976	0215	933	26.4	6.90	2.103						

Minimum discharge:

Water Year	Date	Discharge (ft^3/s)	Discharge (m^3/s)	Water Year	Date	Discharge (ft^3/s)	Discharge (m^3/s)
1975	Sept. 30	.05	.001	1977	Nov. 1, 4	.04	.001
1976	Oct. 4, 10	.05	.001				

DISCHARGE, IN CUBIC FEET PER SECOND, MARCH TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	1.8	2.2	.71	.14	.26	.20	
2					---	1.3	1.0	.53	49	.40	.20	
3					---	.94	113	.53	.70	.39	.25	
4					---	.70	4.9	.53	.19	.61	.25	
5					---	.55	1.7	.45	.15	.21	.25	
6					---	.55	1.1	.45	.71	.22	.31	
7					---	.54	22	.81	4.9	.24	.31	
8					---	.52	1.9	.45	.40	.27	.31	
9					---	29	1.1	.31	.22	.19	.40	
10					---	2.2	.85	.38	.18	.25	.35	
11					---	.90	74	.31	.51	.23	1.0	
12					---	.61	9.3	.29	.17	.27	4.0	
13					---	.51	1.8	.33	.17	.28	.30	
14					---	12	30	.35	.17	.29	.17	
15					4.4	1.6	119	.45	.18	.31	.16	
16					4.9	.92	7.9	.30	.18	.28	.16	
17					3.2	.72	4.6	.33	.22	.33	.18	
18					18	.70	1.9	.34	.24	.31	.20	
19					4.6	.58	1.2	.34	.28	.34	3.6	
20					1.9	.48	.91	.36	.39	.35	4.7	
21					1.4	.43	.77	.37	.17	.36	.15	
22					1.3	.42	.66	.30	.29	.39	.12	
23					18	.39	.53	.30	.17	.34	.12	
24					11	.40	.48	.32	.44	.38	.15	
25					1.5	3.3	.47	.32	.19	.41	.10	
26					.86	.54	3.5	.35	.20	.42	.09	
27					.82	.40	3.0	.31	.18	.42	.07	
28					145	3.5	.61	.24	.18	.38	.08	
29					195	5.3	14	.14	.23	.38	.07	
30					12	29	1.9	.13	.23	2.1	.07	
31					3.2	---	1.5	---	.26	.25	---	
TOTAL	---	---	---	---	---	---	100.80	427.78	11.33	61.64	11.86	18.32
MEAN	---	---	---	---	---	---	3.36	13.8	.38	1.99	.38	.61
MAX	---	---	---	---	---	---	29	119	.81	49	2.1	4.7
MIN	---	---	---	---	---	---	.39	.47	.13	.14	.19	.07
CFSM	---	---	---	---	---	---	.58	2.37	.07	.34	.07	.11
IN.	---	---	---	---	---	---	.64	2.73	.07	.39	.08	.12

07032222 JOHNS CREEK TRIBUTARY AT HOLMES ROAD NEAR MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.25	1.9	.79	.86	.81	4.2	.45	1.9	.48	.43	14
2	.09	.25	1.2	108	.73	.79	2.2	.45	1.5	.46	.48	6.3
3	.10	.31	.93	15	.71	.77	1.5	.36	.46	.45	.50	.48
4	.07	2.3	.81	2.2	.72	.77	1.2	.30	6.4	1.2	.53	28
5	.06	.71	.71	1.2	131	158	.95	.35	.60	.37	.50	.78
6	.07	49	6.6	.97	8.2	4.3	.77	2.2	.31	.28	.66	.50
7	.08	1.2	2.3	18	2.6	2.1	.63	.41	.20	.29	.70	.57
8	.08	.20	.93	2.3	1.8	169	.55	.28	.20	.30	.69	.79
9	.07	2.8	.81	.86	1.4	30	.53	.28	.20	.31	.75	.56
10	.08	18	.81	.68	1.2	5.5	.50	.29	.26	.29	.76	.56
11	.09	.25	.49	8.5	1.4	3.1	.45	.25	.22	.34	.87	.57
12	.09	.13	.45	2.4	1.3	25	.45	.23	.24	.35	.93	.62
13	.08	.13	.31	2.1	1.1	3.8	.63	.27	.25	1.4	.98	.66
14	.09	.13	.45	1.9	.97	2.2	.62	.43	.23	.29	.99	.46
15	.09	.16	18	1.3	.84	1.8	.44	4.0	.30	.24	.81	.52
16	.26	.16	3.2	1.5	.83	1.3	.42	9.4	4.1	.25	.88	.79
17	.26	.20	.75	1.3	81	1.1	.36	.34	.18	.25	.93	1.1
18	.11	.25	.39	1.1	46	1.1	.34	.21	131	.25	.89	1.3
19	.07	.13	.28	1.1	8.0	1.1	.34	.16	4.3	.24	.93	1.5
20	.08	.45	.34	1.1	2.5	1.0	.43	.16	.75	.26	.88	.26
21	.13	.10	.31	1.1	161	1.1	.38	.18	.33	.33	.90	.17
22	.38	.06	.25	.93	6.9	.87	.24	.18	.23	.33	.80	.15
23	.31	.08	.25	.93	2.7	.77	.25	.21	5.5	.39	.76	.15
24	.31	.08	.25	1.5	1.9	.81	83	.28	1.0	.44	.60	.18
25	2.1	.10	65	52	1.4	1.1	12	.29	121	.57	.26	.17
26	.53	24	19	12	1.2	1.7	1.5	.46	3.0	.38	.25	.21
27	.20	1.5	2.2	2.8	.96	8.0	.94	.55	103	.27	.25	3.3
28	.25	.25	1.2	1.7	.89	2.1	.65	61	10	.33	1.0	.11
29	.31	.20	1.8	1.4	1.0	140	.50	10	3.7	.40	.48	.11
30	.31	161	1.8	1.2	---	66	.45	.78	1.2	.54	.21	.09
31	.25	---	1.4	.95	---	24	---	.37	---	.29	.22	---
TOTAL	7.07	264.38	135.12	248.81	471.11	659.99	117.42	95.12	402.56	12.57	20.82	64.96
MEAN	.23	8.81	4.36	8.03	16.2	21.3	3.91	3.07	13.4	.41	.67	2.17
MAX	2.1	161	65	108	161	169	83	61	131	1.4	1.0	28
MIN	.06	.06	.25	.68	.71	.77	.24	.16	.18	.24	.21	.09
CFSM	.04	1.51	.75	1.38	2.78	3.65	.67	.53	2.30	.07	.12	.37
IN.	.05	1.69	.86	1.59	3.01	4.21	.75	.61	2.57	.08	.13	.41

WTR YR 1976 TOTAL 2499.93 MEAN 6.83 MAX 169 MIN .06 CFSM 1.17 IN 15.95

07032222 JOHNS CREEK TRIBUTARY AT HOLMES ROAD NEAR MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.05	.26	.12	.62	1.9	1.1	.50	.25	.50	.45	.15
2	.10	.05	.22	.10	.62	1.7	35	.53	.23	.20	.45	.14
3	.11	.05	.19	.12	.74	271	70	.81	.22	.18	.47	.14
4	.15	.05	.16	.26	.87	47	108	.53	.20	.20	.45	.14
5	.21	.07	.16	.36	.84	4.6	7.8	.60	.19	.20	.48	.16
6	.10	.07	.93	30	.79	1.7	2.2	.58	.23	.25	.45	.21
7	.07	.09	1.3	9.5	.75	1.1	1.4	.59	.26	.21	.50	.14
8	.08	.10	.27	3.1	.76	.81	1.1	.62	.29	.20	.59	.15
9	.11	.12	.19	28	.83	.71	.84	.50	.28	.26	.70	.18
10	.11	.14	.21	3.6	.85	.62	.71	.40	.25	.55	.69	.35
11	.09	.14	.62	1.3	.86	3.1	.65	.37	.25	.21	.84	.20
12	.10	.16	.81	1.0	6.7	32	.61	.40	.29	.17	.50	.16
13	.12	.16	.32	13	2.2	3.3	.56	.40	42	.16	.23	43
14	.12	.20	.22	130	1.5	1.9	.57	.38	3.8	.16	9.4	5.6
15	.12	.20	.21	7.6	1.2	1.5	.52	.33	.33	.28	3.4	.34
16	.10	.18	.20	2.9	.98	1.1	.49	.27	.20	.35	.31	.25
17	.10	.17	.18	1.2	1.0	.93	.51	.24	.81	.38	.20	.22
18	.07	.20	.15	1.0	1.0	.97	.44	.23	2.4	.38	.23	.24
19	.07	.20	.15	.79	.93	.79	5.8	.24	.46	.43	.26	.25
20	.16	.31	.15	.86	.86	.74	4.1	.23	.26	1.3	.20	.29
21	.07	.12	.14	.77	.81	.75	.73	.21	.25	.33	.18	.34
22	.09	.10	.12	.69	.85	.71	.91	.20	.29	.31	.16	.35
23	.11	.08	.15	.74	74	.75	7.3	.25	.31	.54	.15	.25
24	27	.08	.15	4.5	12	.90	1.9	.26	.30	15	.13	150
25	92	.10	1.5	2.5	3.6	1.0	.78	.28	.26	11	.11	15
26	.30	60	.45	1.7	2.8	1.0	.59	.30	160	3.6	.12	1.0
27	.06	1.8	.25	1.8	2.5	1.2	.51	.33	17	.35	.13	45
28	.07	4.5	.29	1.5	1.9	5.9	.54	.32	.63	.34	.11	1.9
29	.29	.53	.24	.85	---	1.5	.56	.30	.34	.34	.13	38
30	2.4	.28	.38	.71	---	1.2	.50	.28	.24	.38	.12	15
31	.09	---	.20	.67	---	.93	---	.30	---	.40	.14	---
TOTAL	124.66	70.30	10.77	251.24	123.36	393.31	256.72	11.78	232.82	39.16	22.28	319.15
MEAN	4.02	2.34	.35	8.10	4.41	12.7	8.56	.38	7.76	1.26	.72	10.6
MAX	92	60	1.5	130	74	271	108	.81	160	15	9.4	150
MIN	.06	.05	.12	.10	.62	.62	.44	.20	.19	.16	.11	.14
CFSM	.69	.40	.06	1.39	.76	2.18	1.47	.07	1.33	.22	.12	1.82
IN.	.80	.45	.07	1.60	.79	2.51	1.64	.08	1.49	.25	.14	2.04

CAL YR 1976 TOTAL 2299.09 MEAN 6.28 MAX 169 MIN .05 CFSM 1.08 IN 14.67
WTR YR 1977 TOTAL 1855.55 MEAN 5.08 MAX 271 MIN .05 CFSM .87 IN 11.84

07032224 JOHNS CREEK AT RAINES ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°02'05", long 89°53'10", Shelby County, Hydrologic Unit 08010211, on right bank at upstream side of Raines Road, 500 ft (152 m) west of Mendenhall Road, and 1.0 mi (1.6 km) south of Winchester Road.

DRAINAGE AREA.--19.4 mi^2 (50.2 km^2).

PERIOD OF RECORD.--May 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 276 ft (84 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,640 ft^3/s (103 m^3/s) Sept. 24, 1977, gage height, 14.56 ft (4.438 m); minimum, 0.04 ft^3/s (0.001 m^3/s) Sept. 12, 13, 1977.

EXTREMES FOR WATER YEARS 1975-77.--Peak discharges above base of 1,200 ft^3/s (34.0 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
July 2, 1975	1745	*2840	80.4	12.84	3.914
Nov. 30, 1975	1020	2050	58.1	10.90	3.322
Feb. 5, 1976	1500	1930	54.7	10.61	3.234
Feb. 17, 1976	2320	1860	52.7	10.43	3.179
Feb. 21, 1976	0830	2050	58.1	10.88	3.316
Mar. 5, 1976	0315	*2560	72.5	12.18	3.712
Mar. 29, 1976	2305	2170	61.5	11.20	3.414
June 25, 1976	0710	1250	35.4	8.87	2.704
June 27, 1976	2045	1440	40.8	9.38	2.859
Mar. 3, 1977	1745	2490	70.5	12.02	3.664
June 26, 1977	1820	1820	51.5	10.35	3.155
Sept. 24, 1977	1405	*3640	103	14.56	4.438

Minimum discharge:

Water Year	Date	Discharge (ft^3/s)	Discharge (m^3/s)
1975	Sept. 8	.10	.003
1976	Oct. 12	.05	.001
1977	Sept. 12, 13	.04	.001

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								---	5.8	5.7	3.9	.28
2								---	4.0	360	3.4	1.2
3								---	3.8	16	1.5	5.3
4								---	7.0	4.9	4.9	3.0
5								---	7.2	2.7	1.5	.68
6								---	3.7	33	1.0	.34
7								---	44	106	3.8	.20
8								---	13	10	3.6	.55
9								---	2.3	6.3	.77	3.3
10								---	2.8	5.1	.43	2.0
11								---	2.8	6.8	.81	3.5
12								---	2.8	2.7	2.0	37
13								---	7.5	3.2	5.0	.54
14								---	8.0	2.0	3.1	.20
15								---	3.4	4.9	3.6	1.1
16								---	1.7	2.5	.75	4.5
17								---	1.7	6.0	.99	5.0
18								---	6.0	2.8	.76	1.1
19								---	7.2	3.2	3.5	31
20								---	7.0	10	3.1	40
21								---	9.9	3.6	3.9	1.8
22								3.3	2.3	8.1	4.7	2.1
23								3.0	2.0	3.1	3.5	10
24								4.4	1.6	62	.33	6.8
25								4.9	2.5	6.1	1.1	3.7
26								50	7.3	6.9	5.0	7.7
27								24	31	1.2	3.9	5.9
28								10	5.7	1.0	4.2	.57
29								104	4.9	1.7	3.4	.76
30								13	3.5	1.9	12	2.3
31								29	---	4.1	1.1	---
TOTAL								---	212.4	693.5	91.54	182.42
MEAN								---	7.08	22.4	2.95	6.08
MAX								---	44	360	12	40
MIN								---	1.6	1.0	.33	.20
CFSM								---	.37	1.16	.15	.31
IN.								---	.41	1.33	.18	.35

07032224 JOHNS CREEK AT RAINES ROAD AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	2.0	20	3.3	2.2	.52	18	5.5	19	3.0	1.2	62
2	4.7	1.0	6.3	380	1.6	.42	7.4	1.6	17	2.0	.93	38
3	1.5	4.0	3.3	123	1.5	.42	5.0	1.5	4.9	1.7	.73	17
4	.34	20	2.4	11	1.3	.39	3.6	1.2	14	5.3	.60	511
5	.23	5.0	1.5	4.8	348	515	2.7	1.2	4.1	2.0	.73	16
6	1.2	200	55	3.5	36	.98	2.4	13	2.1	1.3	.73	3.1
7	4.6	10	9.6	80	9.9	.39	1.9	3.0	1.6	1.0	.73	1.8
8	2.7	1.0	4.8	6.0	7.8	449	1.4	1.5	1.5	1.0	.69	3.2
9	3.4	15	.80	2.9	5.2	100	1.2	1.2	1.2	.88	.65	7.5
10	.13	80	.60	2.5	3.9	30	.92	1.2	1.5	.93	.69	2.4
11	.09	5.0	1.0	19	4.8	8.0	1.1	1.2	1.3	.78	.65	1.8
12	.07	1.5	.80	11	3.7	48	1.9	1.3	.99	.78	.65	.79
13	.11	1.8	.56	9.3	3.5	8.3	2.5	1.3	.83	4.1	.61	.74
14	.17	2.0	.41	5.0	2.8	6.8	2.4	2.9	.78	4.6	.57	.60
15	1.2	.80	86	2.9	3.3	4.0	1.2	19	.88	1.7	.50	.51
16	5.7	1.4	19	2.8	2.5	3.3	.65	39	13	1.3	.44	.84
17	6.5	2.0	4.9	2.0	212	2.4	.56	2.9	1.8	1.2	.38	1.3
18	1.1	5.0	1.8	1.3	527	1.9	.61	1.8	253	.93	.38	1.5
19	.23	2.2	1.3	1.3	14	2.6	.61	1.5	17	.93	.38	2.7
20	.51	9.0	1.5	2.0	7.7	2.1	1.5	1.1	3.9	.88	.26	.83
21	1.0	2.9	1.2	1.2	529	1.5	1.4	1.0	2.0	.93	.16	.51
22	2.0	.93	1.2	1.3	12	.86	.61	1.2	2.3	.93	.16	.25
23	1.0	.61	.92	1.2	3.5	.86	.45	1.4	10	.99	.15	.22
24	2.3	1.3	.67	4.2	2.0	2.4	259	1.3	5.1	1.0	.21	.20
25	20	.62	250	202	1.4	1.8	77	1.3	256	1.2	.69	.18
26	2.5	121	84	52	1.0	25	7.8	2.3	9.7	1.4	.83	.18
27	1.0	16	12	11	.75	34	4.5	4.7	204	1.5	.29	29
28	1.5	6.3	6.0	6.3	.65	7.4	2.2	222	42	1.1	.35	1.7
29	2.0	4.2	8.2	5.2	.70	487	1.7	49	29	4.5	.50	1.1
30	3.5	548	8.0	3.9	---	295	1.7	6.5	7.0	2.2	.11	.82
31	4.0	---	6.2	3.0	---	96	---	3.3	---	1.6	.09	---
TOTAL	79.98	1070.56	599.96	964.9	1749.70	2136.34	413.91	396.9	927.48	53.66	16.04	707.77
MEAN	2.58	35.7	19.4	31.1	60.3	68.9	13.8	12.8	30.9	1.73	.52	23.6
MAX	20	548	250	380	529	515	259	222	256	5.3	1.2	511
MIN	.07	.61	.41	1.2	.65	.39	.45	1.0	.78	.78	.09	.18
CFSM	.13	1.84	1.00	1.60	3.11	3.55	.71	.66	1.59	.09	.03	1.22
IN.	.15	2.05	1.15	1.85	3.35	4.10	.79	.76	1.78	.10	.03	1.36

WTR YR 1976 TOTAL 9117.20 MEAN 24.9 MAX 548 MIN .07 CFSM 1.28 IN 17.48

07032224 JOHNS CREEK AT RAINES ROAD AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	1.4	.91	.48	1.3	2.9	.83	1.1	.27	1.2	.60	.13
2	.60	.96	1.1	.64	1.3	2.3	91	.98	.25	.85	.44	.09
3	1.5	.94	.68	1.1	1.9	690	227	2.6	1.0	.70	.40	.10
4	.50	.69	.58	1.0	2.1	198	295	.80	.80	.75	.44	.12
5	2.3	.46	.51	2.2	1.7	18	22	1.2	.27	.70	.36	.27
6	1.9	.38	3.6	105	1.0	10	9.0	.75	.15	.65	.44	.20
7	.54	.32	6.2	40	.79	6.2	4.1	.56	.14	.60	.52	.11
8	.52	.28	1.5	8.8	1.0	4.3	2.5	2.9	.12	.56	.52	.08
9	.48	.34	.85	95	1.1	3.3	1.7	1.7	.11	.56	.52	.09
10	.39	.36	.80	13	1.3	3.0	1.3	.40	.30	2.5	.40	.11
11	.34	.45	4.1	4.2	2.2	15	.95	.33	.25	.70	1.8	.07
12	.26	.68	5.8	2.7	29	100	.74	.36	.21	.50	8.6	.06
13	.26	.85	2.0	34	6.4	10	.70	.33	112	.40	.56	90
14	.75	.70	1.2	388	4.5	5.0	.62	.33	11	.30	51	29
15	.35	.63	1.1	26	3.2	4.0	.69	.30	2.1	.40	30	2.8
16	.41	.36	.88	7.7	2.7	2.7	.57	.30	.85	.60	2.1	1.4
17	.34	.44	.75	3.2	2.6	2.1	.44	.36	7.9	.80	.74	1.1
18	.23	.44	.69	2.6	2.4	2.3	.60	.40	54	.90	.48	.85
19	.39	.27	.61	2.1	2.0	2.1	15	.44	4.9	1.0	.37	1.3
20	2.6	.96	.57	2.4	1.6	1.4	8.7	.40	1.0	5.0	.33	1.3
21	.50	.38	.36	1.9	1.7	1.2	2.6	.70	.77	1.0	.30	1.8
22	.32	.19	.33	1.7	10	.97	2.9	.40	.66	.80	1.5	2.1
23	.99	.17	.36	2.0	203	.87	17	.30	.59	.80	.54	1.5
24	122	.19	.37	12	30	.80	5.4	.22	.91	55	.27	769
25	297	.18	8.9	7.9	7.9	.90	1.9	.40	.49	127	.19	17
26	9.1	183	3.6	4.7	5.3	1.1	1.2	.33	244	85	.18	3.4
27	3.4	10	1.4	4.4	4.0	1.5	1.4	.36	49	2.1	.16	120
28	2.0	12	1.0	3.0	2.8	11	1.1	1.3	5.3	1.2	.15	6.5
29	2.6	2.3	.79	1.5	---	2.5	2.7	.36	1.2	1.4	.12	76
30	25	1.0	1.3	1.4	---	1.4	2.1	.25	.75	.75	.15	6.9
31	3.0	---	1.1	1.2	---	.88	---	.22	---	.92	.13	---
TOTAL	481.13	221.32	53.34	781.82	334.79	1105.72	721.74	21.38	501.29	295.64	104.31	1133.38
MEAN	15.5	7.38	1.72	25.2	12.0	35.7	24.1	.69	16.7	9.54	3.36	37.8
MAX	297	183	8.9	388	203	690	295	2.9	244	127	51	769
MIN	.23	.17	.33	.48	.79	.80	.44	.22	.11	.30	.12	.06
CFSM	.80	.38	.09	1.30	.62	1.84	1.24	.04	.86	.49	.17	1.95
IN.	.92	.42	.10	1.50	.64	2.12	1.38	.04	.96	.57	.20	2.17

CAL YR 1976 TOTAL 8122.49 MEAN 22.2 MAX 529 MIN .09 CFSM 1.14 IN 15.57
WTR YR 1977 TOTAL 5755.86 MEAN 15.8 MAX 769 MIN .06 CFSM .81 IN 11.04

07032241 BLACK BAYOU AT SOUTHERN AVENUE AT MEMPHIS, TN

LOCATION.--Lat 35°06'55", long 89°56'00", Shelby County, Hydrologic Unit 08010211, on right bank 130 ft (40 m) downstream from Southern Avenue, and 150 ft (46 m) east of Normal Street.

DRAINAGE AREA.--0.59 mi^2 (1.53 km^2).

PERIOD OF RECORD.--December 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD. Maximum discharge, 486 ft^3/s (13.8 m^3/s) Sept. 29, 1977, gage height, 9.05 ft (2.758 m); minimum, 0.04 ft^3/s (0.001 m^3/s) May 18, 1976, Nov. 16, 17, Dec. 22, 1977.

EXTREMES FOR WATER YEARS 1975-77.--Peak discharges above base of 250 ft^3/s (7.08 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Jan. 10, 1975	0315	270	7.65	6.90	2.103
Mar. 12, 1975	0920	*469	13.3	8.85	2.697
Mar. 28, 1975	0025	285	8.07	7.05	2.149
Apr. 9, 1975	0920	254	7.19	6.75	2.057
Feb. 5, 1976	1225	266	7.53	6.87	2.094
Mar. 26, 1976	2105	272	7.70	6.92	2.109
Mar. 29, 1976	1840	350	9.91	7.71	2.350
June 1, 1976	2205	334	9.46	7.55	2.301
June 29, 1976	1430	312	8.84	7.33	2.234
July 29, 1976	1845	286	8.10	7.11	2.167
Sept. 4, 1976	1315	*367	10.4	7.88	2.402
May 8, 1977	1740	462	13.1	8.81	2.685
Aug. 14, 1977	1235	274	7.76	7.03	2.143
Sept. 24, 1977	1200	321	9.09	7.49	2.283
Sept. 29, 1977	0455	*486	13.8	9.05	2.758

Minimum discharge:

Water Year	Date	Discharge (ft^3/s)	Discharge (m^3/s)
1975	Sept. 12, 13, 29	.08	.002
1976	May 18	.04	.001
1977	Nov. 16, 17, Dec. 22	.04	.001

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	1.4	8.7	1.3	1.3	.80	.75	.90	1.5	.51
2			---	1.4	2.6	1.4	1.1	.90	.85	2.0	1.1	.57
3			---	2.6	3.4	1.4	.89	5.0	.84	.90	4.5	.41
4			---	1.1	3.1	1.4	.87	.90	.82	.80	1.1	.28
5			---	1.1	7.1	1.4	.93	.90	.89	.90	.73	1.1
6			---	1.1	2.5	1.4	.98	.90	.92	.80	.75	.36
7			---	1.0	1.6	1.3	1.3	.90	.88	.70	.81	.27
8			---	5.4	1.5	1.3	2.2	1.1	.98	.70	.81	.42
9			---	1.0	1.4	4.0	15	.90	.99	.70	.82	.47
10			---	29	1.3	3.0	1.2	.90	1.3	1.0	.66	2.0
11			---	1.0	1.2	13	1.0	7.5	.90	1.5	.67	.89
12			---	1.4	1.2	71	.99	.80	.86	1.3	.67	9.0
13			---	.90	1.2	16	1.2	.80	.70	1.1	.67	.33
14			---	.90	1.2	2.5	2.3	3.0	.70	.95	.67	.29
15			---	1.0	2.5	.95	1.0	2.5	1.6	.99	.59	.31
16			---	1.1	3.5	1.2	1.6	1.3	1.6	1.0	.59	.37
17			---	1.1	2.0	.93	1.5	1.5	1.1	1.2	.46	.35
18			---	1.0	1.9	4.0	1.5	1.4	1.1	.97	.57	.34
19			---	1.0	1.9	1.2	.98	1.3	1.0	1.0	.48	5.4
20			.70	.90	1.8	1.0	.88	2.0	1.1	6.0	.49	.54
21			.80	1.4	1.9	.98	.80	2.5	.90	4.0	.60	.30
22			.70	1.6	7.5	1.4	1.4	2.1	.80	2.5	.61	.34
23			1.0	1.6	6.0	1.7	1.9	2.1	.80	2.0	.55	.33
24			24	1.8	1.5	1.2	1.9	2.1	.90	2.0	.66	.36
25			1.8	1.4	1.4	1.0	4.1	2.5	.90	1.5	.58	.31
26			1.1	1.8	1.4	1.1	4.1	5.1	.90	1.5	.48	.30
27			3.6	1.3	1.3	6.3	1.9	1.1	1.6	1.5	.38	.34
28			1.1	1.4	1.3	21	3.3	3.3	.80	1.5	.45	.30
29			2.2	1.8	---	6.6	.97	6.8	.80	1.5	.48	.41
30			1.4	1.3	---	.98	7.7	.85	.90	1.5	5.6	.28
31			1.6	5.3	---	.92	---	1.5	---	1.5	.46	---
TOTAL	---	---	---	74.10	73.9	172.86	66.79	65.25	29.18	46.41	29.49	27.48
MEAN	---	---	---	2.45	2.64	5.58	2.23	2.10	.97	1.50	.95	.92
MAX	---	---	---	29	8.7	71	15	7.5	1.6	6.0	5.6	9.0
MIN	---	---	---	.90	1.2	.92	.80	.80	.70	.70	.38	.27
CFSM	---	---	---	4.15	4.48	9.46	3.78	3.56	1.64	2.54	1.61	1.56
IN.	---	---	---	4.79	4.65	10.88	4.20	4.11	1.84	2.92	1.86	1.73

07032241 BLACK BAYOU AT SOUTHERN AVENUE AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.66	.92	2.5	.69	1.4	1.1	.62	16	1.8	1.0	5.0
2	.39	.59	.66	8.0	.39	2.5	1.0	1.7	5.0	2.2	.80	1.5
3	.35	2.5	.82	2.8	.91	1.9	1.3	1.9	.62	1.6	.89	5.7
4	.38	2.2	1.4	2.6	.99	3.2	2.1	2.7	.47	4.1	.83	37
5	.39	1.2	1.1	2.8	13	9.2	1.6	2.5	.62	1.6	.92	1.2
6	.45	17	5.2	2.8	1.3	.74	1.3	14	.57	1.7	.97	1.2
7	.54	.66	1.1	4.7	.86	.89	1.5	2.5	.72	1.6	.89	1.5
8	.98	.63	1.8	3.5	.71	11	1.7	2.3	.74	1.8	.89	1.8
9	1.5	4.6	.68	3.5	.91	3.0	1.5	2.1	1.6	1.8	.95	2.8
10	.63	3.0	.46	3.1	.99	1.5	1.8	2.3	1.0	1.8	1.1	1.3
11	1.9	.63	1.3	3.8	1.6	1.6	1.9	2.0	.66	1.7	.78	2.1
12	.59	.48	2.4	3.5	.78	8.3	2.0	2.1	.60	1.8	.83	1.0
13	1.9	.74	2.0	3.3	.79	.58	4.6	2.4	.90	5.3	.80	1.3
14	2.8	.60	1.6	2.8	1.0	.70	1.9	3.3	1.1	1.5	.90	.41
15	3.3	.52	13	3.2	1.5	.60	1.7	2.0	.76	1.7	.87	1.3
16	6.6	.53	2.4	3.5	.96	.97	1.8	2.1	3.8	2.0	.88	.98
17	5.1	.64	2.8	3.5	12	.99	1.3	2.8	.59	1.5	1.2	1.9
18	2.1	.56	4.2	3.1	1.7	1.6	1.4	2.2	6.0	1.6	.84	1.7
19	.61	.56	3.9	3.2	.77	1.8	1.8	2.3	.48	1.7	.89	3.4
20	1.3	2.9	4.0	3.7	1.7	1.6	2.4	2.4	.43	1.7	.77	1.7
21	2.7	.61	3.0	3.5	18	4.1	2.2	2.2	.70	1.5	1.2	1.2
22	3.5	.61	2.0	3.4	1.1	5.5	1.9	2.8	.70	1.7	.87	2.3
23	4.3	.56	1.5	3.5	1.4	3.5	1.7	4.2	.75	1.1	1.0	1.5
24	3.0	.72	1.5	5.8	1.0	4.4	6.8	6.3	.75	1.3	.83	1.2
25	8.9	.63	13	5.9	.78	2.1	2.0	4.4	1.5	1.5	.76	.76
26	.75	6.4	2.5	2.8	2.0	5.0	2.0	8.0	1.0	1.3	1.1	.73
27	2.7	.59	2.3	1.6	1.1	2.0	1.7	10	1.0	1.2	1.2	2.1
28	2.4	.72	2.2	.77	.97	2.7	2.5	25	.90	.83	5.0	2.3
29	.61	.61	2.7	.84	1.2	34	3.0	4.0	3.0	6.9	6.8	2.0
30	.55	25	2.5	.92	---	3.7	1.2	2.4	2.5	.62	.50	1.8
31	.54	---	2.5	.80	---	1.5	---	2.0	---	.74	.61	---
TOTAL	62.15	77.65	87.44	99.73	71.10	122.57	60.7	127.52	55.46	59.19	37.87	90.68
MEAN	2.00	2.59	2.82	3.22	2.45	3.95	2.02	4.11	1.85	1.91	1.22	3.02
MAX	8.9	25	13	8.0	18	34	6.8	25	16	6.9	6.8	37
MIN	.35	.48	.46	.77	.39	.58	1.0	.62	.43	.62	.50	.41
CFSM	3.39	4.39	4.78	5.46	4.15	6.70	3.42	6.97	3.14	3.24	2.07	5.12
IN.	3.91	4.89	5.50	6.28	4.48	7.72	3.82	8.03	3.49	3.73	2.38	5.71

CAL YR 1975 TOTAL 883.90 MEAN 2.42 MAX 77 MIN .24 CFSM 4.10 IN 55.64
WTR YR 1976 TOTAL 952.06 MEAN 2.60 MAX 37 MIN .35 CFSM 4.41 IN 59.93

07032241 BLACK BAYOU AT SOUTHERN AVENUE AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.42	.48	.67	.84	.82	.61	.42	1.3	1.2	.86	.86
2	.36	.47	.52	.65	.37	.96	7.1	.45	1.2	1.0	.80	.79
3	.54	.44	.57	.82	.55	25	7.1	.88	1.6	1.1	.55	.66
4	.65	.65	.78	.68	.75	1.0	4.4	.52	1.4	1.0	.63	.62
5	4.4	.23	.60	.83	.70	.64	.81	.47	1.3	1.1	.65	.65
6	.68	.35	1.6	5.0	.65	.61	.63	.52	1.2	1.1	.70	.69
7	.87	.38	.40	.76	.69	.78	.54	.41	1.0	1.2	.69	.59
8	.74	.72	.78	.76	.76	.57	.46	17	.88	1.0	.66	.74
9	.93	.44	.58	2.1	.78	.87	.47	.49	.95	2.6	.71	.86
10	.53	.44	.65	.83	1.0	1.9	.49	1.3	.84	2.9	.83	.66
11	.74	.50	1.6	.48	1.7	6.5	.54	.96	.82	1.3	2.9	.69
12	.54	.44	.73	.84	3.4	2.3	.38	.71	.96	1.3	.69	.67
13	1.1	.24	2.3	8.6	.93	.74	.55	.93	1.3	1.1	.76	6.8
14	.57	.54	.72	9.3	.78	.70	.54	.74	1.3	.99	9.8	2.6
15	.83	.25	1.3	.47	2.1	.53	.63	.74	1.1	.97	.86	.69
16	.64	.30	.78	.32	.39	.63	.51	.67	1.5	1.2	.80	.60
17	.77	1.5	.70	.58	.77	.53	.51	.96	2.1	1.3	.68	.50
18	.29	.98	.70	.80	.72	.69	1.3	.84	6.0	1.0	.61	.67
19	1.4	.52	.69	.39	.65	.66	3.0	.97	1.0	4.2	.65	1.1
20	1.5	.84	.90	1.1	.66	.68	1.8	.86	.99	1.6	.68	.67
21	.60	.44	.83	1.2	.92	.58	.56	.90	1.1	1.1	.80	.63
22	.40	.63	.70	.93	.88	.66	.60	.79	1.3	2.6	.74	.59
23	2.9	.53	.50	.83	6.4	.62	2.2	1.0	1.2	1.2	.70	.76
24	6.3	.50	.46	1.2	.70	.57	1.7	.75	1.2	1.3	.70	34
25	17	.58	3.2	.39	.70	.66	.48	3.6	1.3	1.2	.78	.82
26	.40	8.3	.48	.94	1.4	.44	.46	.63	4.7	1.1	.78	.83
27	.43	.59	.65	.53	.59	1.2	.53	6.2	3.0	1.2	.70	8.8
28	.41	.90	.79	.58	.62	2.2	.46	1.3	1.2	.97	.73	.56
29	2.2	.60	.72	.76	---	.76	.48	1.3	1.2	5.5	2.7	5.8
30	1.5	.65	1.4	.63	---	.57	.45	1.2	1.3	.89	.68	23
31	.61	---	.72	.77	---	.60	---	1.1	---	1.1	.71	---
TOTAL	52.23	24.37	27.83	44.74	31.40	55.97	40.29	49.61	46.24	47.32	35.53	97.90
MEAN	1.68	.81	.90	1.44	1.12	1.81	1.34	1.60	1.54	1.53	1.15	3.26
MAX	17	8.3	3.2	9.3	6.4	25	7.1	17	6.0	5.5	9.8	34
MIN	.29	.23	.40	.32	.37	.44	.38	.41	.82	.89	.55	.50
CFSM	2.85	1.37	1.53	2.44	1.90	3.07	2.27	2.71	2.61	2.59	1.95	5.53
IN.	3.29	1.53	1.75	2.82	1.98	3.52	2.54	3.12	2.91	2.98	2.24	6.16

CAL YR 1976 TOTAL 829.25 MEAN 2.27 MAX 37 MIN .23 CFSM 3.85 IN 52.20
WTR YR 1977 TOTAL 553.43 MEAN 1.52 MAX 34 MIN .23 CFSM 2.58 IN 34.84

07032260 CYPRESS CREEK AT NEELY ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°01'36", long 90°03'23", Shelby County, Hydrologic Unit 08010211, on right bank at downstream end of bridge on Neely Road, 1.8 mi (2.9 km) west of U.S. Highway 51 and 1.1 mi (1.8 km) southeast of U.S. Highway 61.

DRAINAGE AREA.--3.18 mi^2 (8.24 km^2).

PERIOD OF RECORD.--February 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 244 ft (74.4 m), from topographic map.

REMARKS.--Records poor prior to January 1977 and fair thereafter. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,590 ft^3/s (45.0 m^3/s) May 11, 1975, gage height, 12.95 ft (3.947 m); no flow several days each year.

EXTREMES FOR WATER YEARS 1975-77.--Peak discharges above base of 400 ft^3/s (11.3 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 11, 1975	2155	1240	35.1	11.58	3.530
Mar. 12, 1975	0930	1570	44.5	12.88	3.926
Mar. 28, 1975	2155	1090	30.9	10.90	3.322
May 11, 1975	1700	*1590	45.0	12.95	3.947
May 26, 1975	1625	698	19.8	8.99	2.740
June 27, 1975	1600	1010	28.6	10.52	3.206
Sept. 19, 1975	2200	839	23.8	9.71	2.960
Feb. 5, 1976	1245	734	20.8	9.18	2.798
Feb. 17, 1976	2000	558	15.8	8.06	2.457
Mar. 29, 1976	2025	*1380	39.1	12.16	3.706
Apr. 24, 1976	1900	566	16.0	8.11	2.472
July 20, 1976	2045	656	18.6	8.72	2.658
Sept. 4, 1976	1015	431	12.2	7.28	2.219
Mar. 3, 1977	1520	584	16.5	7.85	2.393
July 25, 1977	2125	*1070	30.3	10.73	3.271
Sept. 24, 1977	1200	821	23.3	9.53	2.905

No flow several days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, FEBRUARY TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					---	.15	1.2	20	.35	.06	.20	1.1
2					---	.06	.73	3.0	.26	.11	.08	.72
3					---	.02	.50	60	.15	.08	7.0	.68
4					---	.03	.44	3.1	.15	.17	2.5	.58
5					---	.04	.42	2.4	.35	.18	.80	1.6
6					---	.06	.42	.86	.15	1.3	.60	.95
7					---	.03	.42	4.3	.49	1.0	.55	.42
8					---	.00	.82	12	.42	.50	.48	.49
9					---	1.0	26	1.1	.69	.10	2.6	3.4
10					---	13	1.3	.58	.95	.05	.98	.49
11					---	60	.62	117	.49	.04	.49	.26
12					---	360	.49	4.1	.17	.03	.46	7.7
13					---	73	.97	1.9	.06	.10	.36	.81
14					---	15	6.3	8.8	7.3	.05	.35	.20
15					---	3.9	.97	21	.35	.03	.36	.26
16					---	3.6	.56	2.1	1.1	.02	.35	.26
17					---	2.3	.53	1.9	.12	.02	1.4	.26
18					---	19	.54	.87	.10	.05	.48	.27
19					---	2.8	1.2	.57	.05	.03	.81	42
20					---	1.7	.29	.49	.06	3.0	.42	5.5
21					---	1.6	.19	.42	.74	1.5	.37	1.2
22					---	3.5	.15	.42	.04	.50	.26	.90
23					---	2.1	.15	.35	.06	1.0	.19	.58
24					---	1.6	.14	.35	.04	.40	.14	.80
25					---	1.0	12	.26	.04	.20	.07	.77
26					.95	1.0	7.3	91	.04	.10	.06	.61
27					.81	7.7	.31	2.4	68	.06	2.3	.54
28					.35	102	21	1.4	1.4	.04	.85	.55
29					---	38	20	22	.12	.02	.43	.61
30					---	3.6	31	1.2	.07	.02	5.8	.70
31					---	2.0	---	2.1	---	.02	1.3	---
TOTAL	---	---	---	---	---	719.79	136.96	387.97	84.31	10.78	33.04	75.21
MEAN	---	---	---	---	---	23.2	4.57	12.5	2.81	.35	1.07	2.51
MAX	---	---	---	---	---	360	31	117	68	3.0	7.0	42
MIN	---	---	---	---	---	.00	.14	.26	.04	.02	.06	.20
CFSM	---	---	---	---	---	7.30	1.44	3.93	.88	.11	.34	.79
IN.	---	---	---	---	---	8.42	1.60	4.54	.99	.13	.39	.88

07032260 CYPRESS CREEK AT NEELY ROAD AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.02	1.0	.32	.20	.20	1.2	.30	8.1	.20	5.9	7.5
2	.63	.02	.35	33	.20	.20	.81	.25	2.2	.78	.20	1.5
3	.57	5.4	.30	3.7	.20	.61	.58	.25	.53	.35	.06	9.9
4	.64	11	.20	.77	.20	1.2	.49	.15	.32	8.3	.03	71
5	.69	2.0	.20	.43	36	25	.42	.08	.25	.23	.03	1.5
6	.68	72	20	.42	.95	.69	.35	30	.15	.14	1.4	.58
7	.58	2.2	1.0	3.9	.20	.42	.26	2.0	.14	.09	.11	.20
8	.43	.58	.50	.38	.15	50	.42	.50	.11	.08	.06	1.1
9	.42	9.9	.40	.23	.26	7.0	1.3	.15	.12	.08	.04	.82
10	.42	13	.30	.31	.81	1.2	.81	.20	.12	.08	.03	.33
11	.41	.76	.25	1.8	1.7	.69	.20	.12	.12	.07	.02	.19
12	.42	.68	.25	.38	.35	1.5	.15	.30	.11	.06	.02	.23
13	.38	.42	.25	1.4	.20	.26	2.7	.90	.09	.07	.03	.17
14	.34	.26	.25	.39	.11	.42	2.5	.75	.07	.16	.04	.38
15	2.7	.23	15	.30	.11	.42	.20	.50	.06	.04	.04	.15
16	8.3	.23	.40	.32	.06	.20	.04	.30	18	.04	.06	.03
17	1.9	.20	.20	.26	43	.15	.03	.19	6.6	.05	.20	.05
18	.54	.18	.18	.21	7.2	.20	.03	.24	10	.04	.81	.04
19	.42	.23	.18	.20	.49	.35	.02	.14	.96	.04	1.1	.03
20	.33	6.4	.29	1.3	.69	.81	3.0	.11	.47	43	2.0	.92
21	.23	.39	.21	.37	60	.20	7.0	.11	.34	1.0	.95	.43
22	.13	.30	.20	.35	1.7	.06	4.9	.15	.31	.09	.35	.05
23	.03	.25	.20	.35	1.0	.58	16	.15	1.5	.06	.26	.03
24	.03	.24	.20	3.8	.69	3.0	103	.16	.35	.05	.20	.02
25	25	.23	26	10	.58	6.3	2.9	.11	35	.04	.20	.02
26	1.9	20	2.8	1.8	.49	43	.42	2.1	.90	.05	.20	.04
27	.11	.68	.61	.35	.35	8.5	.20	4.9	.50	.79	.20	4.0
28	.04	.25	.39	.30	.26	3.0	.15	41	.35	.55	.19	.25
29	.03	.20	2.2	.30	.20	182	.12	2.4	.29	12	1.6	.07
30	.03	91	.83	.26	---	13	.50	.97	.27	1.2	.45	.05
31	.03	---	.39	.26	---	3.7	---	.59	---	.20	.12	---
TOTAL	49.06	239.25	75.53	68.16	158.35	355.06	150.70	90.07	88.33	69.93	16.90	101.58
MEAN	1.58	7.98	2.44	2.20	5.46	11.5	5.02	2.91	2.94	2.26	.55	3.39
MAX	25	91	26	33	60	182	103	41	35	43	5.9	71
MIN	.03	.02	.18	.20	.06	.06	.02	.08	.06	.04	.02	.02
CFSM	.50	2.51	.77	.69	1.72	3.62	1.58	.92	.93	.71	.17	1.07
IN.	.57	2.80	.88	.80	1.85	4.15	1.76	1.05	1.03	.82	.20	1.19

WTR YR 1976 TOTAL 1462.92 MEAN 4.00 MAX 182 MIN .02 CFSM 1.26 IN 17.11

07032260 CYPRESS CREEK AT NEELY ROAD AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.46	.06	.02	.01	.07	.18	.05	.00	.00	.02	.02
2	.04	.37	.06	.02	.02	.07	15	.04	.00	.00	.02	.01
3	.04	.47	.04	.05	.06	101	35	.66	.00	.00	.01	.00
4	.03	.50	.04	.02	.10	7.2	24	.05	.00	.00	.01	.00
5	9.5	.27	.03	.03	.07	.86	2.7	.05	.00	.00	.01	3.1
6	2.0	.31	3.4	23	.04	.38	1.2	.01	1.8	.00	.00	.52
7	.81	.28	1.0	3.2	.05	.27	1.2	.00	.08	.00	.00	.16
8	.42	.12	.06	1.1	.06	.19	.81	20	.00	.00	.00	.05
9	.26	.03	.03	11	.07	.16	.66	.90	.00	.47	.00	.03
10	.35	.02	.03	.84	.09	.19	.51	.05	.00	.05	.00	.03
11	1.0	.05	5.1	.29	.93	22	.47	.03	.00	.00	.00	.02
12	.42	.25	1.3	.19	7.3	11	.51	.03	.00	.00	.47	.01
13	.15	.04	.11	22	.08	.63	.51	.05	13	.00	.04	11
14	.11	1.0	.04	43	.07	.26	.36	.05	1.3	.00	.96	2.9
15	.11	.25	.04	1.6	.04	.18	.34	.03	1.4	.00	2.5	.01
16	.11	.03	.04	.49	.02	.12	.36	.02	.11	.01	.18	.01
17	.11	.03	.03	.15	.04	.12	.31	.02	2.4	.00	.03	.00
18	.11	.03	.03	.14	.04	.23	1.9	.02	28	.00	.03	.00
19	.78	.03	.04	.06	.03	.16	10	.01	.82	8.9	.02	.04
20	2.6	1.6	.04	.04	.03	.21	1.5	.00	.03	1.4	.02	.02
21	.12	.16	.03	.01	.03	.33	.94	.00	.01	.00	.02	.00
22	.05	.03	.03	.00	.05	.70	1.1	.02	.01	.00	.01	.00
23	1.5	.01	.03	.01	16	.30	32	.02	.00	.03	.00	.00
24	41	.03	.03	1.2	.51	.21	1.2	.56	.00	.10	.00	83
25	36	.03	5.5	.02	.16	.26	.27	2.4	.00	59	.00	.77
26	1.3	23	.18	.02	4.2	.40	.05	.29	7.7	2.6	.00	.08
27	.43	1.0	.04	.03	.31	3.8	.05	.02	3.4	.08	.00	23
28	.29	2.4	.05	.03	.07	7.4	.07	.02	.64	.13	.00	.16
29	1.7	.35	.05	.02	---	.45	.05	.01	.38	1.4	.87	23
30	7.4	.11	.57	.01	---	.28	.07	.01	.00	.06	.09	.24
31	1.0	---	.08	.02	---	.20	---	.01	---	.03	.03	---
TOTAL	109.79	33.26	18.11	108.61	30.48	159.63	133.32	25.43	61.08	74.26	5.34	148.18
MEAN	3.54	1.11	.58	3.50	1.09	5.15	4.44	.82	2.04	2.40	.17	4.94
MAX	41	23	5.5	43	16	101	35	20	28	59	2.5	83
MIN	.03	.01	.03	.00	.01	.07	.05	.00	.00	.00	.00	.00
CFSM	1.11	.35	.18	1.10	.34	1.62	1.40	.26	.64	.76	.05	1.55
IN.	1.28	.39	.21	1.27	.36	1.87	1.56	.30	.71	.87	.06	1.73

CAL YR 1976 TOTAL 1260.24 MEAN 3.44 MAX 182 MIN .01 CFSM 1.08 IN 14.74
WTR YR 1977 TOTAL 907.49 MEAN 2.49 MAX 101 MIN .00 CFSM .78 IN 10.61

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first table is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table. Other measurements made for seepage investigations, are listed in subsequent tables.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same site.

Discharge measurements made at low-flow partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Mobile River basin				
*02384900	Coahulla Creek near Cleveland, Tn.	Lat 35°07'00", long 84°50'18" Bradley County, at bridge on State Highway 74, 2.5 miles southeast of intersection of State Highways 60 and 74 in Cleveland.	4.35	1975-77	-	-
		Cumberland River basin				
03407879	Smoky Creek at Smoky Junction, Tn.	Lat 36°16'38", long 84°22'27", Scott County, 1.0 mile southwest of Smoky Junction and at mile 0.9.	32.8	1975-77	10- 8-76 11- 3-76 11-17-76 12- 3-76	12 42 10 30
03435637	Sulphur Fork Red River near Greenbrier, Tn.	Lat 36°29'05", long 86°47'33", Robertson County, at bridge on State Highway 76, 4.0 miles north of Greenbrier.	34.9	1974-77	10-13-76 5-18-77 6- 8-77 7-21-77 8-30-77	4.8 15.8 5.8 4.1 5.2
03435700	Sulphur Fork Red River above Beaver Dam Creek near Springfield, Tn.	Lat 36°30'53", long 86°50'46", Robertson County, 400 ft downstream from private bridge, 0.9 mile upstream from Beaver Dam Creek, 2 miles east of Springfield, and at mile 32.9	49.1	1975-77	10-13-76 5-18-77 6- 8-77 7-21-77 8-30-77	8.2 23 9.2 9.8 6.6
03435750	Beaver Dam Creek near Springfield, Tn.	Lat 36°31'32", long 86°50'33", Robertson County, at private bridge, 2.7 miles northeast of Springfield and at mile 0.4.	14.2	1975-77	10-13-76 5-18-77 6- 8-77 7-21-77 8-30-77	1.3 7.2 2.6 2.2 1.4
03435800	Sulphur Fork Red River at Springfield, Tn.	Lat 36°31'15", long 86°53'12", Robertson County, at old U.S. Highway 41 bridge at Springfield, and at mile 29.1.	79.9	1969, 1975-77	10-13-76 5-18-77 6- 8-77 7-21-77 8-30-77	7.9 40 14 13 12
03435810	Sulphur Fork Red River near Springfield, Tn.	Lat 36°31'00", long 86°54'49", Robertson County, at bridge on county road, 2 miles west of Springfield and at mile 26.7.	84.6	1969, 1975-77	10-13-76 5-20-77 6- 9-77 7-21-77 8-30-77	9.5 36 14 14 9.2

See footnotes at end of the table.

Discharge measurements made at low-flow partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin				
03454790	Trail Fork Big Creek at Del Rio, Tn.	Lat 35°54'27", long 83°01'26", Cocke County, at county road bridge, 1.0 mile south of Del Rio, and at mile 0.6.	32.6	1975-77	11-15-76	17
03454850	Long Creek near Del Rio, Tn.	Lat 35°56'53", long 83°03'12", Cocke County, at bridge on U.S. Highways 25 and 70, 2.5 miles northwest of Del Rio, and at mile 0.1.	11.7	1953-54, 1975-77	11-15-76	2.4
03466099	Jockey Creek at Limestone, Tn.	Lat 36°13'31", long 82°38'06", Washington County, 0.25 mile west of Limestone, at county road bridge 400 ft above mouth.	19.0	1954, 1972-73, 1976-77	11-16-76	5.8
03466700	Little Chucky Creek at Warrensburg, Tn.	Lat 36°07'28", long 83°05'37", Greene County, 0.2 mile south of Warrensburg, 1.0 mile above mouth, 300 ft below bridge.	40.4	1954, 1966, 1968-70, 1972, 1974, 1976-77	11-15-76 7-12-77 9- 2-77	5.0 8.2 5.1
03466870	Roaring Fork near Greenville, Tn.	Lat 36°13'18", long 82°52'05", Greene County, at county road bridge, 0.4 mile southeast of Bales Chapel and 4.5 miles northwest of Greeneville.	20.6	1975-77	11-14-76	4.4
03466880	Roaring Fork near Mosheim, Tn.	Lat 36°14'38", long 82°53'37", Greene County, at first bridge upstream from the mouth and 4.5 miles northeast of Mosheim.	46.4	1975-77	11-16-76	8.9
03467490	Bent Creek near Springvale, Tn.	Lat 36°11'14", long 83°09'53", Hamblen County, at bridge 0.6 mile above mouth, 2.4 miles southeast of Springvale.	41.2	1954, 1959, 1975-77	11-15-76	6.6
03468140	Muddy Creek near Chestnut Hill, Tn.	Lat 35°56'57", long 83°20'51", Jefferson County, at county road bridge, 1.4 miles north of Chestnut Hill, and at mile 0.7.	1.78	1976-77	11-16-76	.24
03470330	Tuckahoe Creek at Peters Mill, Tn.	Lat 35°58'02", long 83°42'07", Knox County, at county road bridge at Peters Mill, 4.0 miles east of Riverdale, and at mile 0.9.	28.3	1975-77	11-15-76	7.7
03476515	Beidleman Creek near Caywood Ford, Tn.	Lat 36°31'28", long 82°07'53", Sullivan County, at second bridge upstream from mouth, 0.7 mile north of Caywood Ford and 2.4 miles west of South Holston Dam.	27.4	1975-77	11-17-76	21
03499053	Culton Creek at Alcoa, Tn.	Lat 35°46'41", long 83°59'46", Blount County, at county road bridge, 1,000 ft upstream from Louisville and Nashville Railroad bridge, at Alcoa.	11.8	1975-77	11-15-76	5.7
03499111	Stock Creek near Rockford, Tn.	Lat 35°52'11", long 83°55'09", Knox County, 0.2 mile upstream from culvert on Hall Road, 400 ft upstream from unnamed tributary, and 2.8 miles northeast of Rockford.	18.5	1975-77	11-15-76	7.4
03518470	Bald River near Tellico Plains, Tn.	Lat 35°19'20", long 84°10'40", Monroe County, just below Bald River Falls, 50 ft above mouth and 7 miles southeast of Tellico Plains.	21.7	1927, 1975-77	11-16-76	22
03518700	Cane Creek at Belltown Mill, Tn.	Lat 35°25'31", long 84°15'16", Monroe County, at county road bridge at Belltown Mill, 0.3 mile southwest of Cane Creek (Belltown P.O.).	18.2	1975-77	11-16-76	6.5

Discharge measurements made at low-flow partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin--Continued				
03520170	Pond Creek near Adolphus, Tn.	Lat 35°42'20", long 84°27'35", Loudon County, 150 ft below county road bridge, 2.5 miles southwest of Prospect, 3.1 miles southwest of Adolphus and 3.6 miles northwest of Philadelphia.	30.8	1953, 1975-77	11-16-76	10
03531700	Mulberry Creek at Alanthus Hill, Tn.	Lat 36°33'18", long 83°22'51", Hancock County, at county road bridge, 1.0 mile southeast of Alanthus Hill, and at mile 0.1.	23.9	1975-77	11-17-76	10
03543300	Little Sewee Creek near Center Point, Tenn.	Lat 35°35'54", long 84°42'13", Meigs County, at bridge on Center Point Road, 1.6 miles southwest of Center Point and at mile 0.9.	32.3	1959, 1975, 1977	11-16-76	9.6
03566117	East Fork North Mouse Creek near Niota, Tn.	Lat 35°32'54", long 84°33'45", McMinn County, at first bridge upstream from mouth, 2.4 miles north of Niota, and at mile 0.5.	2.87	1975, 1977	11-16-76	.36
03604750	Birdsong Creek at Holladay, Tn.	Lat 35°52'53", long 88°08'39", Benton County, at bridge on State Highway 69, 0.7 mile north of Holladay.	15.7	1975-77	8-25-77	3.4
03606350	Big Sandy River at Westport, Tn.	Lat 35°53'34", long 88°18'32", Carroll County, at county road bridge 0.3 mile southeast of Westport and at mile 43.4.	110	1975-77	8-25-77	63
		Obion River Basin				
07024760	Spring Creek near Greenfield, Tn.	Lat 36°11' 24", long 88°45'53", Weakley County, at bridge on State Highway 54, 3.2 miles northeast of Greenfield and at mile 2.3.	93.4	1955, 1975-77	8-25-77	26
07025190	Mud Creek near Sharon, Tn.	Lat 36°15'59", long 88°50'05", Weakley County, at bridge on U.S. Highway 45-E, 2.2 miles north of Sharon and at mile 11.0.	45.6	1958, 1975-77	8-24-77	1.2
07025300	North Fork Obion River at Jones Mill, Tn	Lat 36°26'46", long 88°27'57", Henry County, at county road bridge at Jones Mill and at mile 42.8.	83.7	1958-61, 1964, 1975-77	8-25-77	48
07026100	Reeds Creek near Trimble, Tn.	Lat 36°10'48", long 89°15'15", Dyer County, at county road bridge, 0.4 mile north of Locust Grove, 4.0 miles southwest of Trimble, and at mile 1.6	51.8	1975-77	8-24-77	7.6
07027280	Jacks Creek at Jacks Creek, Tn.	Lat 35°28'16", long 88°31'21", Chester County, at bridge on State Highway 100, at town of Jacks Creek, and at mile 8.5.	17.9	1975-77	8-25-77	9.7
07027750	Nixon Creek near Nut Bush, Tn.	Lat 35°41'59", long 89°16'36", Haywood County, 1.6 miles northeast of Christmasville, on county road bridge 7.2 miles east of Nut Bush.	42.5	1976-77	8-24-77	.7
		Hatchie River basin				
07030140	Cane Creek near Cherry, Tn.	Lat 35°40'30", long 89°41'21", Lauderdale County, at bridge on State Highway 87-A, 1.2 miles east of Cherry and at mile 4.6.	83.9	1958-60, 1962, 1964, 1975-77	8-24-77	5.7
07030160	Indian Creek at Gilt Edge, Tn.	Lat 35°33'09", long 89°49'20", Tipton County, at bridge on State Highway 59, 0.2 mile east of Gilt Edge.	65.9	1976-77	8-24-77	1.3

* Also crest-stage partial-record station.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1977

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Mobile River basin					
*02384900	Coahulla Creek near Cleveland, Tn.	Lat 35°07'00", long 84°50'18", Bradley County, at bridge on State Highway 74, 2.5 miles southeast of intersection of State Highways 74 and 60 at Cleveland. Datum of gage is 828.3 ft above mean sea level.	4.35	1955-77	9- 7-77	7.65	1,580
		Green River basin					
03313600	West Fork Drakes Creek tributary near Fountain Head	Lat 36°33'34", long 86°27'26", Sumner County, at culvert under county road, 2.3 miles northeast of Fountain Head, and 0.4 mile upstream from mouth.	0.95	1967-77	3- 3-77	4.37	107
		Cumberland River basin					
03409000	White Oak Creek at Sunbright, Tn.	Lat 36°14'38", long 84°40'14", Morgan County, at bridge on U.S. Highway 27 in Sunbright. Datum of gage is 1,294.05 ft above mean sea level.	13.5	1933‡, 1955-77	4- 4-77	10.88	-
03414700	Puncheon Camp Creek at Allred, Tn.	Lat 36°19'35", long 85°11'10", Overton County, at bridge on State Highway 85 at Allred, 3.9 miles south of intersection of State Highways 85 and 52.	15.5	1955-77	4- 4-77	8.58	-
03415700	Big Eagle Creek near Livingston, Tn.	Lat 36°26'57", long 85°16'27", Overton County, at bridge on county road, 0.8 mile north of intersection with State Highway 42, 4.7 miles northeast of Livingston.	a7.98	1955-77	10-17-75 4- 4-77	4.79 5.84	d902 1,100
03417700	Mathews Branch tributary near Livingston, Tn.	Lat 36°20'04", long 85°20'23", Overton County, at culvert under State Highway 42, 3.0 miles south of intersection of State Highways 85 and 42, 2.9 miles southwest of Livingston.	0.49	1955-77	3-30-76 4- 4-77	3.40 3.12	d120 102
03418900	Raccoon Creek near Old Winesap, Tn.	Lat 35°47'12", long 85°08'40", Cumberland County, at culvert under county road, 1.2 miles southeast of Old Winesap.	1.52	1973-77	11-12-75 4- 4-77	6.14 11.4	d88 500
03420360	Mud Creek tributary No. 2 near Summitville, Tn.	Lat 35°36'10", long 86°01'33" Coffee County, at culvert under county road, 3.5 miles northwest of Summitville, and 0.7 mile upstream from mouth.	2.28	1967-77	10-17-75 4- 4-77	4.52 4.53	d310 312
03420500	Barren Fork near Trousdale, Tn.	Lat 35°39'55", long 85°53'00", Warren County, at county highway bridge on Trousdale-McMinnville pike, 3.2 miles east of Trousdale. Datum of gage is 925.61 ft above mean sea level.	126	1933-57‡ 1958-77	4- 4-77	11.68	10,300

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Cumberland River basin--Continued					
03420600	Owen Branch near Centertown, Tn.	Lat 35°42'30", long 85°53'05", Warren County, at bridge on U.S. Highway 70-S, 2.4 miles southeast of Centertown.	4.60	1955-77	10-25-76	4.15	675
03421200	Charles Creek near McMinnville, Tn.	Lat 35°43'00", long 85°46'05", Warren County, at bridge on county road at Faulkner Springs, 2.7 miles north of McMinnville.	31.1	1955-77	4- 4-77	-	-
03425500	Spring Creek near Lebanon, Tn.	Lat 36°10'49", long 86°14'29", Wilson County, at bridge on Eastover Road, 3.4 miles southeast of Lebanon. Datum of gage is 556.08 ft above mean sea level.	35.3	1955-61‡ 1962-77	4- 4-77	9.41	6,590
03425700	Spencer Creek near Lebanon, Tn.	Lat 36°14'20", long 86°24'03" Wilson County, at bridge on county road, 100 ft north of junction of county road and U.S. Highway 70, 6.5 miles west of square in Lebanon.	3.32	1955-77	4- 4-77	5.87	620
03425800	Cedar Creek tributary at Green Hill, Tn.	Lat 36°13'52", long 86°31'40", Wilson County, at culvert under U.S. Highway 70, 0.2 mile east of Green Hill.	0.86	1955-57, 1959-77	4-22-77	2.94	115
03426000	Drakes Creek above Hendersonville, Tn.	Lat 36°22'14", long 86°37'00", Sumner County, at bridge on Long Hollow Pike, 4.5 miles north of Hendersonville. Datum of gage is 503.06 ft above mean sea level.	19.2	1955-61‡ 1962-77	4- 4-77	7.01	2,380
03429500	Stewart Creek near Smyrna, Tn.	Lat 35°59'54", long 86°30'18", Rutherford County, at bridge on Fifteenth Avenue at former Sewart Air Force Base, 1.3 miles northeast of Smyrna. Datum of gage is 490.00 ft above mean sea level.	69.7	1953-58‡ 1959-63, 1965-77	3-12-77	c11.90	4,060
03430118	McCrory Creek at Ironwood Drive at Donelson, Tn.	Lat 36°09'07", long 86°39'02", Davidson County, at bridge under Ironwood Drive, 1.3 miles southeast of intersection of U.S. Highway 70 (Lebanon Road) and Donelson Pike in Donelson.	7.31	1977-	4- 4-77	6.55	
03430400	Mill Creek at Nolensville, Tn.	Lat 35°57'32", long 86°40'31", Williamson County, at bridge on Sunset Road, 0.6 mile northwest of Nolensville.	12.0	1965-77	3-12-77	7.50	4,800
03431000	Mill Creek near Antioch, Tn.	Lat 36°04'54", long 86°40'50", Davidson County, at bridge on Franklin-Limestone Road, 1.6 miles north of Antioch. Datum of gage is 472.57 ft above mean sea level.	64.0	1954-61‡ 1962-63 1964-75‡ 1976-77	3-12-77	13.44	5,640
03431040	Sevenmile Creek at Blackman Road, at Nashville, Tn.	Lat 36°04'21", long 86°44'00", Davidson County, at bridge on Blackman Road, 7.0 miles southeast of State capitol in Nashville. Datum of gage is 499.08 ft above mean sea level.	12.2	1965-77	4-11-77	5.23	

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Cumberland River basin--Continued					
03431060	Mill Creek at Thompson Lane, near Woodbine, Tn.	Lat 36°07'04", long 86°43'08", Davidson County, at bridge on Thompson Lane, 1.5 miles northeast of intersection of Thompson Lane and Nolensville Road (U.S. Highway 31-A, 41-A) in Woodbine. Datum of gage is 432.55 ft above mean sea level.	93.4	1965-77	3-12-77	13.09	8,800
03431062	Mill Creek tributary at Glenrose Avenue at Woodbine, Tn.	Lat 36°07'02", long 86°43'37", Davidson County, at culvert under Glenrose Avenue, 1.1 miles northeast of intersection of Nolensville Road and Thompson Lane in Woodbine, and 750 ft upstream from mouth.	1.17	1977-	9- 5-77	3.64	
03431120	West Fork Browns Creek at General Bates Drive, at Nashville, Tn.	Lat 36°06'29", long 86°47'07", Davidson County, at bridge on General Bates Drive, 4.0 miles south of State capitol in Nashville. Datum of gage is 499.94 ft above mean sea level.	3.30	1965-77	4- 4-77	5.22	880
03431240	East Fork Browns Creek at Baird-Ward Printing Company, at Nashville, Tn.	Lat 36°06'33", long 86°46'00", Davidson County, at bridge on access road to Baird-Ward Printing Co., Plant No. 1, 500 ft west of 100-Oaks Shopping Center, and 4.0 miles southeast of State capitol in Nashville. Datum of gage is 497.91 ft above mean sea level.	1.58	1965-77	4- 4-77	2.82	149
03431340	Browns Creek at Factory Street, at Nashville, Tn.	Lat 36°08'26", long 86°45'31", Davidson County, at bridge on Factory Street, 800 ft downstream from Louisville and Nashville Railroad bridge, and 2.3 miles southeast of State capitol in Nashville. Datum of gage is 418.92 ft above mean sea level.	13.2	1965-77	3-12-77	7.18	1,900
03431490	Pages Branch at Avondale, Tn.	Lat 36°12'22", long 86°46'24", Davidson County, at culvert under Trinity Lane, 900 ft east of intersection of Interstate 65 and Trinity Lane at Avondale, 0.9 mile upstream from mouth.	2.01	1977-	3-12-77	4.94	-
03431520	Claylick Creek at Lickton, Tn.	Lat 36°18'02", long 86°48'37", Davidson County, at bridge on Lickton Road in Lickton, 1,200 ft upstream from mouth.	4.13	1965-77	3-12-77	6.29	-
03431550	Earthman Fork at Whites Creek, Tn.	Lat 36°15'55", long 86°49'51", Davidson County, at bridge on Whites Creek Pike in town of Whites Creek, 1,800 ft upstream from mouth.	6.29	1965-77	3-12-77	6.60	1,130
03431580	Ewing Creek at Knight Road, near Bordeaux, Tn.	Lat 36°13'55", long 86°48'14", Davidson County, at bridge on Knight Road, 3.0 miles northeast of Bordeaux. Datum of gage is 438.27 ft above mean sea level.	13.3	1965-77	3-12-77	9.36	3,200
03432500	West Harpeth River near Leipers Fork, Tn.	Lat 35°53'56", long 86°58'01", Williamson County, at bridge on former State Highway 96, 1.8 miles east of Leipers Fork. Datum of gage is 634.10 ft above mean sea level.	66.9	1955-61‡ 1962-77	3- 4-77	13.78	9,100

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Cumberland River basin--Continued					
03435030	Red River near Portland, Tn.	Lat 36°33'24", long 86°34'14", Sumner County, at county road bridge, 1.5 miles upstream from Austin Branch, 3.5 miles southwest of Portland and at mile 93.0.	15.1	1966-75‡ 1976-77	3- 4-77	9.37	1,850
		Tennessee River basin					
03461230	Caney Creek near Cosby, Tn.	Lat 35°47'03", long 83°12'11", Cocke County, at culvert under State Highway 32, 3.3 miles southeast of Cosby.	1.62	1967-77	4- 4-77	4.83	142
03461260	Caney Creek at Cosby, Tn.	Lat 35°48'09", long 83°14'18", Cocke County, at culvert under county road, 700 ft upstream from mouth, and 1.1 miles southeast of Cosby.	5.22	1967-77	4- 4-77	12.50	420
03465000	North Indian Creek near Unicoi, Tn.	Lat 36°10'35", long 82°17'36", Unicoi County, on right bank 900 ft upstream from Rocky Branch, 3.4 miles southeast of Unicoi. Datum of gage is 2,209.56 ft above mean sea level.	15.9	1945-57‡ 1959-77	1-21-59	4.30	d670
					7-23-60	3.50	d423
					8- 1-61	4.37	d690
					7- 4-62	4.39	d700
					3-12-63	4.64	d780
					3-15-64	3.11	d310
					3-26-65	4.77	d810
					2-13-66	4.02	d585
					4- 1-68	4.11	d610
					6-11-69	3.54	d435
					12-30-69	3.88	d535
					7-31-71	3.32	d365
					6-21-72	3.72	d490
					3-16-73	4.70	d795
					4- 4-74	3.54	d435
					3-14-75	4.64	d780
					5-15-76	3.55	d435
					4- 4-77	4.69	795
03467500	Nolichucky River near Morristown, Tn.	Lat 36°10'49", long 83°10'32", Hamblen County, on right bank along Southern Railway, 0.6 mile upstream from Susong Bridge, 7 miles southeast of Morristown. Datum of gage is 1,015.73 ft above mean level.	1,679	1921-57‡ 1959-77	4- 5-77	20.69	44,700
03469110	Ramsey Creek near Pittman Center, Tn.	Lat 35°45'33", long 83°20'49", Sevier County, at culvert under State Highway 73, 1.5 miles southeast of Pittman Center.	2.18	1967-77	4- 4-77	5.39	205
03469130	Little Pigeon River near Sevierville, Tn.	Lat 35°51'38", long 83°30'13", Sevier County, at bridge on U.S. Highway 411, 2.9 miles east of Sevierville. Datum of gage is 928.21 ft above mean sea level.	110	1954-77	4- 5-77	13.37	9,500
03469160	East Fork Little Pigeon River near Sevierville, Tn.	Lat 35°51'55", long 83°29'17", Sevier County, at bridge on U.S. Highway 411, 5.2 miles east of Sevierville. Datum of gage is 929.20 ft above mean sea level.	64.1	1954-77	4- 5-77	14.42	4,240
03469500	West Prong Little Pigeon River near Pigeon Forge Tn.[b]	Lat 35°48'21", long 83°34'28", Sevier County, at bridge on old State Highway 71, 1.6 miles northwest of Pigeon Forge. Datum of gage is 965.23 ft above mean sea level.	76.2	1946-49‡ 1954-77	4- 5-77	11.62	8,400

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
03481600	Corn Creek at Mountain City, Tn.	Lat 36°29'23", long 81°48'52", Johnson County, at bridge on county road, 600 ft north of junction of county road and U.S. Highway 421, 1 mile northwest of Mountain City.	5.34	1959-61, 1963-77	4- 4-77	4.14	-
03482000	Roan Creek near Neva, Tn.	Lat 36°22'37", long 81°53'14", Johnson County, on right bank on Butler-Neva road, 1.7 miles southwest of Neva. Datum of gage is 2,103.11 ft above mean sea level.	102	1943-55‡	12-18-61	6.56	d3,600
				1959-77	3-12-63	7.92	d5,700
					3-26-65	7.91	d5,700
					4- 4-74	7.41	4,900
					3-30-75	6.94	d4,150
					4- 5-77	8.16	6,050
03486225	Powder Branch near Johnson City, Tn.	Lat 36°19'03", long 82°16'40", Carter County, at culvert under county road, 4.0 miles east of Johnson City, 4.3 miles southwest of Elizabethton, and at mile 0.2.	4.88	1973-77	4- 4-77	9.94	200
03491200	Big Creek tributary near Rogersville, Tn.	Lat 36°25'30", long 82°57'17", Hawkins County, at culvert under county road, 300 ft upstream from mouth, 2.8 miles northeast of Rogersville.	2.00	1955-77	7-25-77	8.25	1,180
03498700	Nails Creek near Knoxville, Tn.	Lat 35°52'49", long 83°46'47", Sevier County, at culvert under State Highway 71, 0.8 mile southeast of Shooks Gap, 10.5 miles southeast of Knoxville.	0.36	1955-77	4- 5-77	3.43	74
03519610	Baker Creek tributary near Binfield, Tn.	Lat 35°41'56", long 84°02'46", Blount County at culvert under county road, 1.5 miles east of Binfield.	2.10	1966-77	4- 5-77	4.40	
03519640	Baker Creek near Greenback, Tn.	Lat 35°40'21", long 86°46'28", Blount County, at county road bridge, 1.0 mile upstream from Little Baker Creek, 3.4 miles east of Greenback, and at mile 15.0.	16.0	1965-75‡ 1976-77	4- 5-77	7.40	800
03520100	Sweetwater Creek near Loudon, Tn.	Lat 35°44'17", long 84°22'25", Loudon County, at bridge on State Highway 72, 2.0 miles west of Loudon. Datum of gage is 737.03 ft above mean sea level.	62.2	1954-77	4- 5-77	9.88	2,340
03534000	Coal Creek at Lake City, Tn.e/	Lat 36°13'14", long 84°09'27", Anderson County, at bridge on U.S. Highway 25-W, at Lake City. Datum of gage is 842.91 ft above mean sea level.	24.5	1932-34‡ 1955-77	4- 5-77	10.57	7,950
03534500	Buffalo Creek at Norris, Tn.	Lat 36°11'05", long 84°03'34", Anderson County, at culvert under Norris Freeway (State Highway 71), 1.0 mile southeast of Norris. Datum of gage is 901.71 ft above mean sea level.	f9.92	1948-50‡ 1955-77	4- 5-77	10.07	1,460
03535140	South Fork Beaver Creek at Harbison, Tn.	Lat 36°06'51", long 83°51'15", Knox County, at culvert under Tazewell Pike, 0.4 mile south of Harbison. Datum of gage is 1,076.35 ft above mean sea level.	1.23	1967-77	4- 4-77	4.48	285

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
03535180	Willow Fork near Halls Crossroads, Tn.	Lat 36°05'59", long 83°54'27", Knox County, at culvert under Quarry Road, 1.7 miles northeast of Halls Crossroads. Datum of gage is 1,027.82 ft above mean sea level.	3.23	1967-77	4- 4-77	7.17	545
03538130	Caney Creek near Kingston, Tn.	Lat 35°51'53", long 84°23'07", Roane County, 1.5 miles upstream from mouth, 2.4 miles northeast of intersection of U.S. Highway 70 and Buttermilk Road, 7.5 miles east of Kingston.	5.55	1962-77	4- 5-77	6.71	1,060
03538200	Poplar Creek near Oliver Springs, Tn.	Lat 36°01'20", long 84°18'37", Anderson County, at bridge on State Highway 61, 0.9 mile downstream from Brushy Fork, 2.5 miles southeast of Oliver Springs, 4 miles upstream from Indian Creek.	55.9	1954-77	4- 5-77	21.47	-
03538275	Bear Creek near Oak Ridge, Tn.	Lat 35°56'50", long 84°21'48", Roane County, at bridge on county road, 200 ft west of State Highway 95, and 3.9 miles southwest of intersection of State Highway 95 and Anderson County line in Oak Ridge. Datum of gage is 753.92 ft above mean sea level.	7.15	1960-64‡ 1965-77	4- 5-77	7.25	-
03538500	Emory River near Wartburg, Tn.	Lat 36°06'46", long 84°36'54", Morgan County, at bridge on Wartburg-Lancing Road, 1.2 miles northwest of Wartburg. Datum of gage is 1,003.06 ft above mean sea level.	83.2	1935-57‡ 1958-66, 1967-68‡ 1969-77	4- 4-77	22.05	13,000
03538600	Obed River at Crossville, Tn.	Lat 35°57'27", long 85°03'00", Cumberland County, at bridge on former U.S. Highway 70-S, 0.5 mile southwest of junction of U.S. Highways 70-S and 70-N, 1.5 miles northwest of Crossville.	12.0	1955-77	4- 4-77	10.58	-
03538900	Self Creek near Big Lick, Tn.	Lat 35°47'54", long 85°02'33", Cumberland County, at culvert under county road, 1.3 miles southwest of Big Lick.	3.80	1968-77	4- 4-77	8.21	940
03541100	Bitter Creek near Camp Austin, Tn.	Lat 36°00'53", long 84°31'33", Morgan County, at culvert under U.S. Highway 27, 3.0 miles southeast of Camp Austin.	5.53	1967-77	4- 4-77	7.81	2,700
03541500	Whites Creek near Glen Alice, Tn.	Lat 35°47'49", long 84°45'37", Roane County, 2,200 ft above Southern Railway bridge, 1.2 miles southwest of Glen Alice. Datum of gage is 758.62 ft above mean sea level.	108	1935-55‡ 1956-77	4- 4-77	20.2	24,000
03542500	Piney River at Spring City, Tn.	Lat 35°41'59", long 84°51'17", Rhea County, at bridge on U.S. Highway 27, 0.5 mile northeast of Spring City. Datum of gage is 749.65 ft above mean sea level.	95.9	1928-30‡ 1955-77	4- 4-77	15.79	-
03544500	Richland Creek near Dayton, Tn.	Lat 35°30'17", long 85°01'20", Rhea County, 0.4 mile above bridge on State Highway 30, 1.0 mile northwest of Dayton. Datum of gage is 728.59 ft above mean sea level.	50.2	1928-31‡ 1935-55‡ 1956-77	4- 4-77	8.82	8,280

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
03566200	Brymer Creek near McDonald, Tn.	Lat 35°07'20", long 84°57'00", Bradley County, at bridge on U.S. Highways 11 and 64, 1.9 miles east of McDonald.	9.68	1955-77	4- 4-77	5.70	810
03570800	Little Brush Creek near Dunlap, Tn.	Lat 35°24'15", long 85°23'18", Sequatchie County, at bridge on former State Highway 8, 1.5 miles north of Dunlap.	15.4	1959-77	4- 4-77	8.51	2,520
03571600	Brown Spring Branch near Sequatchie, Tn.	Lat 35°08'55", long 85°33'28", Marion County, at culvert under State Highway 27, 2.1 miles northeast of bridge over Little Sequatchie River, 3.1 miles northeast of Sequatchie.	0.67	1955-77	4-23-77	6.45	150
03571800	Battle Creek near Monteagle, Tn.	Lat 35°08'03", long 85°46'15", Marion County, at bridge on former U.S. Highways 41 and 64, 9.2 miles southeast of Monteagle. Datum of gage is 621.51 ft above mean sea level.	50.4	1955-77	1976 3-13-77	<7.02 9.43	<2,700 5,200
03578500	Bradley Creek near Prairie Plains, Tn.	Lat 35°21'21", long 85°58'45", Coffee County, on left bank 165 ft downstream from highway bridge, 1.1 miles northwest of Prairie Plains. Datum of gage is 968.13 ft above mean sea level.	41.3	1952-59‡ 1960-77	4- 4-77	14.20	5,430
03579800	Miller Creek near Cowan, Tn.	Lat 35°10'17", long 85°59'00", Franklin County, at bridge on U.S. Highway 64, 1.8 miles east of Cowan.	4.30	1955-77	4- 4-77	7.17	-
03579900	Boiling Fork Creek at Cowan, Tn.	Lat 35°09'45", long 86°00'20", Franklin County, at bridge on county road, 1,200 ft southeast of intersection of county road and U.S. Highway 64 in Cowan, and at mile 14.6.	17.0	1955-77	4- 4-77	7.61	1,750
03581500	West Fork Mulberry Creek at Mulberry, Tn.	Lat 35°12'34", long 86°27'46", Lincoln County, at old bridge, 1,000 ft downstream from State Highway 50, 0.2 mile southwest of Mulberry. Datum of gage is 687.72 ft above mean sea level.	41.2	1954-62‡ 1963-66, 1967-68‡ 1969-77	4- 4-77	14.06	10,400
03582200	Norris Creek tributary near Belleville, Tn.	Lat 35°13'55", long 86°33'50", Lincoln County, at culvert under U.S. Highway 231, 0.4 mile north of first crossing of Norris Creek from Fayetteville, 3.1 miles south of Belleville.	0.034	1955-77	4- 4-77	5.86	100
03582300	Norris Creek near Fayetteville, Tn.	Lat 35°09'53", long 86°32'43", Lincoln County, at bridge on old State Highway 50, 2.0 miles northeast of Fayetteville. Datum of gage is 666.27 ft above mean sea level.	42.6	1954-77	4- 4-77	11.65	11,800
03583200	Chicken Creek at McBurg, Tn.	Lat 35°11'03", long 86°48'47", Lincoln County, at bridge on county highway R7374 in McBurg.	7.66	1955-77	4- 4-77	5.59	2,180

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
03583300	Richland Creek near Cornersville, Tn.	Lat 35°19'10", long 86°52'20", Marshall County, at bridge on U.S. Highway 31-A, 3.4 miles southwest of Cornersville. Datum of gage is 754.28 ft above mean sea level.	47.5	1962-68‡ 1969-77	4- 4-77	13.78	6,950
03587200	Bluewater Creek tributary near Leoma, Tn.	Lat 35°08'29", long 87°22'05", Lawrence County, at culvert under U.S. Highway 43, 1.8 miles southeast of Leoma.	0.49	1955-77	4- 4-77	3.86	175
03587500	Shoal Creek above Little Shoal Creek at Lawrenceburg, Tn.g/	Lat 35°14'02", long 87°20'00", Lawrence County, at bridge on U.S. Highway 43, 0.5 mile south of intersection of U.S. Highways 43 and 64 in Lawrenceburg.	27.0	1932-33‡ 1955-77	4- 4-77	11.89	5,000
03594200	Eagle Creek near Clifton Junction, Tn.	Lat 35°20'21", long 87°58'22", Wayne County, at bridge on State Highway 114, 2.5 miles northwest of Clifton Junction and 2.6 miles upstream from mouth.	19.0	1955-77	4- 4-77	5.46	1,880
03594300	Cypress Creek tributary near Pope, Tn.	Lat 35°37'10", long 87°57'20", Perry County, at culvert under State Highways 20 and 100, in Craig Hollow, 2.0 miles east of Pope.	0.75	1955-77	3-21-55	3.16	d183
					2-17-56	2.26	d116
					4- 4-57	4.03	d252
					11-17-57	1.88	d91
					1-22-62	3.52	d157
					4- 7-64	1.71	d81
					12- 3-64	2.36	d68
					5-13-67	2.65	d88
					11-27-68	3.29	d137
					4-19-73	3.38	d144
					6- 1-74	4.00	d200
					3-12-75	5.85	d382
					4- 4-77	3.04	118
03597000	Garrison Fork at Fairfield, Tn.	Lat 35°33'59", long 86°17'00", Bedford County, at bridge on county road, 0.1 mile east of Fairfield. Datum of gage is 800.25 ft above mean sea level.	66.3	1954-58‡ 1959-66, 1967-68‡ 1970-77	4- 4-77	14.24	4,850
03597300	Wartrace Creek above Bell Buckle, Tn.	Lat 35°37'45", long 86°21'22", Bedford County, at culvert under county road, 2.7 miles north of Bell Buckle.	4.99	1966-77	4- 4-77	5.13	480
03597450	Kelly Creek tributary near Bell Buckle, Tn.	Lat 35°36'34", long 86°19'11", Bedford County, at bridge on county road, 3.0 miles northeast of Bell Buckle.	0.73	1966-77	1977	<3.57	<155
03597500	Wartrace Creek at Bell Buckle, Tn.	Lat 35°35'16", long 86°20'22", Bedford County, at bridge on State Highway 82, 0.2 mile downstream from Kelly Creek, 0.9 mile east of Bell Buckle, and at mile 7.7. Datum of gage is 822.44 ft above mean sea level.	16.3	1953-61‡ 1962-66 1966-75‡ 1977	4- 4-77	8.89	2,980
03598200	Weakly Creek near Rover, Tn.	Lat 35°38'05", long 86°33'03", Bedford County, at culvert under county road, 3.7 miles southeast of intersection of county road with U.S. Highway 41-A at Rover.	9.46	1955-77	3- 4-77	4.82	840

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
03599200	East Rock Creek at Farmington, Tn.	Lat 35°30'05", long 86°42'50", Marshall County, at bridge on old State Highway 64, 0.2 mile west of Farmington.	43.1	1954-77	3- 4-77	12.69	7,100
03600000	Rutherford Creek near Carters Creek, Tn.	Lat 35°40'23", long 86°58'42", Maury County, at bridge on county road, 2.5 miles south of Neapolis, 3.2 miles south of town of Carters Creek.	68.8	1954-58‡ 1959-77	3- 4-77	18.38	-
03602100	Moss Spring Hollow at Centerville, Tn.	Lat 35°45'44", long 87°27'47", Hickman County, at bridge on State Highways 48 and 100, 1.2 miles south of Centerville.	3.68	1954-77	1-25-76 3- 4-77	d2.74 3.93	- -
03604090	Coon Creek above Chop Hollow near Hohenwald, Tn.	Lat 35°35'19", long 87°41'09", Perry County, at bridge on State Highway 20, 9 miles northwest of Hohenwald.	6.02	1967-77	3- 4-77	3.76	325
03604200	Cane Creek at Farmers Exchange, Tn.	Lat 35°38'53", long 87°39'39", Hickman County, at county road bridge, 0.5 mile north of Farmers Exchange.	45.1	1955-77	3- 4-77	7.87	-
03605700	Deer Creek tributary near Waverly, Tn.	Lat 36°10'20", long 87°44'40", Humphreys County, at culvert under State Highway 13 in Smith Hollow, 8.0 miles northeast of Waverly.	1.04	1955-77	3-12-77	1.87	-
		Obion River basin					
07025220	Cane Creek near Martin, Tn.	Lat 36°19'36", long 88°51'05", Weakley County, at bridge on U.S. Highway 45-E, 1.2 miles south of Martin. Datum of gage is 350.67 ft above mean sea level.	6.79	1955-77	1977	<10.15	-
07028600	Cain Creek tributary near Trenton, Tn.	Lat 35°56'17", long 88°56'27", Gibson County, at culvert under U.S. Highway 45-W, 2.9 miles south of square in Trenton.	0.95	1955-57, 1959-77	3- 3-77	5.81	402
07028700	Cain Creek near Trenton, Tn.	Lat 35°57'56", long 88°57'14", Gibson County, at bridge on U.S. Highway 54, 1.6 miles southwest of Trenton.	14.4	1954-77	3- 3-77	10.33	738
07028900	Middle Fork Forked Deer River near Spring Creek, Tn.	Lat 35°48'37", long 88°37'03", Carroll County, at bridge on U.S. Highway 70, 0.7 mile below Griffin Creek, 4.6 miles northeast of Spring Creek, and at mile 44.9.	88.2	1954-57, 1959-77	3- 4-77	9.78	3,550
07028940	Turkey Creek near Medina, Tn.	Lat 35°47'39", long 88°48'37", Gibson County, at county road (Lewis Road) bridge, 1.7 miles southwest of Medina.	7.87	1967-77	4- 4-77	11.00	2,130
07029050	Nash Creek near Tigrett, Tn.	Lat 35°57'38", long 89°17'07" Dyer County, at bridge on former State Highway 20, 2.3 miles west of Tigrett.	7.23	1955-77	3- 3-77	8.63	690
07029090	Lewis Creek near Dyersburg, Tn.	Lat 36°03'14", long 89°21'42" Dyer County, at bridge on U.S. Highway 51, 2.1 miles northeast of square in Dyersburg. Datum of gage is 276.52 ft above mean sea level.	25.5	1955-77	9-24-77	16.73	1,860

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Loosahatchie River basin					
07030270	Clear Creek near Arlington, Tn.	Lat 35°16'20", long 89°42'17", Shelby County, at bridge on U.S. Highways 70 and 79, 3.0 miles southwest of Arlington. Datum of gage is 245.78 ft above mean sea level.	60.5	1954-56, 1959-77	3- 4-77	15.47	3,970
07030300	Loosahatchie River tributary at St. Elmo Avenue at Memphis	Lat 35°13'56", long 89°58'51", Shelby County, 120 ft downstream from culvert under St. Elmo Avenue, at Memphis.	0.82	1975-77	9-23-77	9.91	-
		Wolf River basin					
07031653	Wolf River tributary at Willey Road, at Germantown, Tn.	Lat 35°05'54", long 89°48'36", Shelby County, 16 ft upstream from culvert on Willey Road and 700 ft west of Cordova Road, at Germantown.	0.21	1975-77	9-30-77	10.94	-
07031657	Wolf River tributary at Neshoba Road, at Germantown, Tn.	Lat 35°06'21", long 89°49'54", Shelby County, 30 ft upstream from culvert on Neshoba Road and 150 ft west of Brookside Drive, at Germantown.	0.36	1975-77	9-30-77	18.10	-
07031665	White Station Creek at Rich Road, at Memphis, Tn.	Lat 35°08'09", long 89°53'37", Shelby County, at downstream side of bridge on Rich Road, 2,000 ft west of White Station Road, at Memphis.	2.45	1975-77	9-30-77	8.36	2,000
07031690	Fletcher Creek tributary at Whitten Road at Memphis	Lat 35°09'38", long 89°50'13", Shelby County, at upstream end of culvert under Whitten Road, 0.5 mile north of Mullins Station Road, 1.1 miles northeast of Shelby Penal Farm.	0.54	1975-77	4-23-77	6.61	170
07031694	Harrington Creek tributary at Elmore Park Road, at Bartlett, Tn.	Lat 35°12'08", long 89°51'26", Shelby County, 25 ft upstream from culvert under Elmore Park Road, 750 ft south of Stage Road, 1 mile east of Bartlett.	0.33	1975-77	9-24-77	17.87	-
07031695	Harrington Creek tributary at Hawthorne Road, at Bartlett, Tn.	Lat 35°11'43", long 89°51'21", Shelby County, 25 ft downstream from culvert under Hawthorne Road, 30 ft west of Elmore Park Road, 1 mile southeast of Bartlett.	0.21	1975-77	9-24-77	9.81	-
07031697	Harrington Creek tributary at Stage Road, at Bartlett, Tn.	Lat 35°12'30", long 89°53'05", Shelby County, 30 ft upstream from culvert under Stage Road, 300 ft west of Chaucer Road, 1 mile west of Bartlett.	0.91	1975-77	9-24-77	9.68	-
07031710	Harrison Creek at Charleswood Road, at Memphis, Tn.	Lat 35°08'34", long 89°55'00", Shelby County, upstream side of bridge at Charleswood Road, 300 ft west of Waring Road, at Memphis.	1.59	1975-77	9-24-77	10.87	980
07031725	Workhouse Bayou tributary at Isabelle Street, at Memphis, Tn.	Lat 35°09'24", long 89°56'01", Shelby County, 200 ft upstream from culvert under Isabelle Street, at Memphis.	0.09	1975-77	9-24-77	4.56	78
07031730	Workhouse Bayou at Holmes Street, at Memphis, Tn.	Lat 35°09'43", long 89°57'04", Shelby County, 50 ft downstream from bridge on Holmes Street, 400 ft south of Macon Road, at Memphis.	1.30	1975-77	9-30-77	10.32	-

See footnotes at end of the table

Annual maximum discharge at crest-stage partial-record stations during water year 1977--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Date	Gage height (feet)	Discharge (ft^3/s)
		Wolf River basin--Continued					
07031765	Overton Bayou at North Drive, at Memphis, Tn.	Lat 35°09'20", long 89°58'52", Shelby County, beside Cypress Drive, 45 ft upstream from culvert under North Drive, at Memphis.	0.30	1975-77	9-30-77	7.13	305
07031773	Lick Creek at Jefferson Avenue, at Memphis, Tn.	Lat 35°08'20", long 89°59'30", Shelby County, 20 ft upstream from culvert under Jefferson Avenue, at Memphis	1.00	1975-77	9-30-77	8.07	710
07031795	Wolf River tributary at Whitney Avenue, at Memphis, Tn.	Lat 35°12'31", long 90°01'15", Shelby County, at upstream end of culvert under Whitney Avenue, at Memphis.	0.35	1975-77	9-30-77	8.78	-
		Nonconnah Creek basin					
07032195	Nonconnah Creek tributary at Shelby Drive, at Memphis, Tn.	Lat 35°01'13", long 89°49'57", Shelby County, at upstream end of culvert under Shelby Drive, at Memphis.	1.58	1975-77	6-26-77	11.33	960
07032242	Cherry Bayou at Park Avenue, at Memphis, Tn.	Lat 35°06'24", long 89°54'13", Shelby County, 20 ft downstream from culvert under Park Avenue, 150 ft west of Colonial Road, at Memphis.	0.18	1975-77	4- 3-77	4.10	-
07032244	Cherokee Creek at Kimball Avenue, at Memphis, Tn.	Lat 35°05'43", long 89°57'31", Shelby County, at upstream end of culvert under Alamo Street, 80 ft north of Kimball Avenue, at Memphis.	0.49	1975-77	5-17-77	7.17	-
07032246	Days Creek at Shelby Drive, at Memphis, Tn.	Lat 35°01'14", long 90°00'37", Shelby County, 75 ft upstream from culvert under Shelby Drive, at Memphis.	2.63	1975-77	6-18-77	5.87	610
07032247	Parkway Bayou at South Parkway East, at Memphis, Tn.	Lat 35°06'33", long 89°59'41", Shelby County, between one-way lanes of South Parkway East, 100 ft west of Castalia Street, at Memphis.	0.49	1975-77	9-24-77	7.94	-
07032249	Latham Branch at Valley Boulevard, at Memphis, Tn.	Lat 35°05'56", long 90°02'43", Shelby County, between one-way lanes of Valley Boulevard, 200 ft downstream from Dison Avenue, at Memphis.	0.05	1975-77	9-24-77	13.84	-

* Also a low-flow partial-record station.
‡ Operated as a continuous-record gaging station.
a Includes 3.21 mi^2 without surface drainage.
b Published as West Fork Little Pigeon River prior to 1966.
c Furnished by Corps of Engineers, Nashville district.
d Revised.
e Published as at Coal Creek prior to 1935.
f Includes 2.10 mi^2 without surface drainage.
g Published as Beeler Fork at Lawrenceburg prior to 1934.

Miscellaneous Sites

Measurements of streamflow at points other than gaging stations are given in the following table. Measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger(†).

Discharge measurements made at miscellaneous sites during water year 1977

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Green River basin				
03312260 Salt Lick Creek	Barren River	Lat 36°33'10", long 85°51'28" Macon County, 1.2 miles upstream from Long Hungry Creek and 1.5 miles northwest of Red Boiling Springs.	14.5	1969	2-22-77 5-26-77	9.8 7.6
03312300 Town Creek	White Oak Creek	Lat 36°21'26", long 86°00'32", Macon County, at bridge on Bradley Hollow Road, 1.0 mile east of Lafayette.	1.85	1961-63	2-22-77	2.38
		Cumberland River basin				
03407790 New River	South Fork Cumberland River	Lat 36°07'28", long 84°25'32", Morgan County, 0.5 mile upstream from Straight Fork, 0.3 mile southwest of Fork Mountain, at mile 55.5.	3.37	1976	10- 8-76 11- 3-76 12- 3-76	.69 5.1 3.9
03407850 New River	South Fork Cumberland River	Lat 36°12'34", long 84°19'18", Campbell County, at State Highway 116 bridge, 300 ft downstream from Ligias Fork, 0.5 mile northwest of Stainville.	66.0	1962, 1976	10- 8-76 11- 3-76 12- 3-76	23 109 78
03407908 New River	South Fork Cumberland River	Lat 36°20'10", long 84°27'06", Scott County, 3.5 miles west of Norma, 0.5 mile upstream from Indian Creek, at Cordell.	198	1976	10- 7-76 11- 2-76 12- 2-76	83 329 189
03415700 Big Eagle Creek	Obey River	Lat 36°26'57", long 85°16'27", Overton County, at bridge on county road, 0.8 mile north of intersection with State Highway 42, 4.7 miles northeast of Livingston.	7.98	1957, 1962-63, 1969, 1976	4- 4-77	913
03418000 Roaring River	Cumberland River	Lat 36°20'27", long 85°25'35", Overton County, on left bank 700 ft upstream from Cleek Branch, 0.2 mile downstream from bridge on State Highway 136, 5.0 miles south of Hilham, and at mile 22.2.	78.7	1931-75‡	2-22-77 5-26-77	30 25
03427680 Bushman Creek	East Fork Stones River	Lat 35°52'45", long 86°20'49", Rutherford County, at State Highway 96 Bridge, 2.0 miles southwest of Compton.	5.52	1974	6- 1-77	*.76
03430800 Collins Creek	Mill Creek	Lat 36°02'42", long 86°39'34", Davidson County, downstream side of culvert at Bell Road, 1.4 miles southeast of Antioch.	3.61	1975-76[a]	6- 2-76 6- 2-76 6- 2-76 3-12-77 4- 3-77 4- 3-77 4- 4-77 4-23-77 4-23-77	[b]267 [b]203 [b]340 315 348 253 231 328 363
03435570 Sulphur Fork Red River	Red River	Lat 36°26'49", long 86°44'13", Robertson County, at county road bridge, 2.3 miles southwest of Oakdale, and at mile 42.6.	4.55	1976	10-13-76 7-21-77	*1.2 *.62

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
03435580 Mill Branch	Sulphur Fork Red River	Lat 36°27'07", long 86°40'29", Robertson County, at bridge on county road, downstream from U.S. Highway 31-W bridge, 1.8 miles southwest of White House, and at mile 4.5.	0.43	1976	10-13-76 7-21-77	*0 *0
03435590 Mill Branch	Sulphur Fork Red River	Lat 36°26'50", long 86°41'27", Robertson County, at county road bridge, 2.2 miles southeast of Oakdale, and at mile 3.45.	1.53	1976	10-13-76 7-21-77	*.11 *.04
03435600 Mill Branch	Sulphur Fork Red River	Lat 36°26'52", long 86°42'53", Robertson County, at county road bridge 3.7 miles southwest of White House, and at mile 1.7.	3.50	1968-69 1972, 1974, 1976	10-13-76 7-21-77	*.45 *.32
03435602 Moss Branch	Mill Branch	Lat 36°27'32", long 86°41'35", Robertson County, at county road bridge 2.4 miles west of White House, and at mile 2.9.	0.48	1976	10-13-76 7-21-77	*0 *0
03435604 Moss Branch Tributary	Moss Branch	Lat 36°28'07", long 86°41'32", Robertson County, at county road bridge at Warren Cemetery, 2.2 miles west of White House.	0.17	1976	10-13-76 7-21-77	*0 *0
03435606 Moss Branch	Mill Branch	Lat 36°27'37", long 86°42'56", Robertson County, at county road bridge 1.0 mile south of Oakdale, 3.6 miles west of White House, and at mile 1.5.	1.98	1976	10-13-76 7-21-77	*.15 *.13
03435610 Sulphur Fork Red River	Red River	Lat 36°27'24", long 86°44'44", Robertson County, at county road bridge 1.7 miles southwest of Baggettsville, 5.2 miles west of White House, and at mile 41.8.	12.5[c]	1976	10-13-76 7-21-77	*2.7 *4.7
03435614 Peyton Branch	Sulphur Fork Red River	Lat 36°26'40", long 86°45'09", Robertson County, at county road bridge 3.4 miles north of Ridgetop, and at mile 1.3.	1.68	1976	10-13-76 7-21-77	*.20 *.09
03435616 Peyton Branch Tributary	Peyton Branch	Lat 36°26'39", long 86°45'07", Robertson County, at mouth, 2.4 miles north of Ridgetop.	0.39	1976	10-13-76 7-21-77	*.02 *.02
03435618 Peyton Branch	Sulphur Fork Red River	Lat 36°27'09", long 86°44'58", Robertson County, 300 ft east of county road 2.0 miles southwest of Baggettsville, and at mile 0.6.	2.36	1976	10-13-76 7-21-77	*.22 *.12
03435620 Sulphur Fork Red River	Red River	Lat 36°28'00", long 86°46'12", Robertson County, at bridge on Old Still House Road, 200 ft above Long Branch, 4.8 miles north of Ridgetop, and at mile 40.	19.1	1976	10-13-76 7-21-77	*3.5 *2.0

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
)3435623 Pole Bridge Branch Tributary	Pole Bridge Branch	Lat 36°24'44", long 86°45'37", Robertson County, at bridge on Lake Road, 1.2 miles northeast of Ridgetop and at mile 0.3.	0.43	1976	10-13-76 7-21-77	d*0.10 d* .02
)3435625 Pole Bridge Branch	Greenbrier Lake	Lat 36°24'50", long 86°46'02" Robertson County, at county road bridge, at outlet of Ridgetop Lake, 1.2 miles north of Ridgetop, and at mile 1.8.	1.34	1974, 1976	10-13-76 7-21-77	* .17 d* .07
03435627 Pole Bridge Branch	Greenbrier Lake	Lat 36°25'18", long 86°46'46", Robertson County, at bridge on Kelley Willis Road, 1.4 miles east of Greenbrier, and at mile 0.9.	3.21	1976	10-13-76 7-21-77	* .43 * .11
03435629 Pole Bridge Branch Tributary	Pole Bridge Branch	Lat 36°26'08", long 86°47'12", Robertson County, at bridge on Old Still House Road, 1.1 miles northeast of Greenbrier, and at mile 1.5.	.10	1976	10-13-76 7-21-77	*0 d* .01
03435631 Long Branch	Sulphur Fork Red River	Lat 36°26'08", long 86°46'50", Robertson County, 600 ft below Greenbrier Lake dam, 1.4 miles east of Greenbrier and at mile 2.6.	5.44	1976	10-13-76 7-21-77	* .37 * .18
03435634 Long Branch	Sulphur Fork Red River	Lat 36°27'29", long 86°46'24", Robertson County, 200 ft above mouth, 3.2 miles northeast of Greenbrier.	9.56	1976	10-13-76 7-21-77	*1.2 * .44
03435635 Savage Branch	Sulphur Fork Red River	Lat 36°28'38", long 86°46'04", Robertson County, 200 ft south of junction of State Highway 76 and Bethlehem Road, 3.9 miles northeast of Greenbrier, and at mile 0.8.	1.76	1976	10-13-76 7-21-77	* .16 * .09
03435644 Santee Creek	Sulphur Fork Red River	Lat 36°30'10", long 86°45'46", Robertson County, at county road bridge 4.1 miles southeast of Hubertville, and at mile 1.9.	2.60	1976	10-13-76 7-21-77	* .24 * .37
03435647 Santee Creek Tributary	Santee Creek	Lat 36°30'05", long 86°45'48", Robertson County, at county road bridge 250 ft above mouth, 4.2 miles southeast of Hubertville.	0.91	1976	10-13-76 7-21-77	* .13 * .08
03435650 Santee Creek	Sulphur Fork Red River	Lat 36°29'51", long 86°46'41", Robertson County, at county road bridge 6 miles east of Springfield, 5 miles north of Greenbrier, and at mile 0.8.	5.13	1976	10-13-76 7-21-77	* .57 * .85
03435705 Beaver Dam Creek	Sulphur Fork Red River	Lat 36°31'25", long 86°44'43", Robertson County, at county road bridge 0.4 mile north of Eden Corner, 3.2 miles southwest of Cross Plains, and at mile 6.7.	0.83	1976	10-13-76 7-21-77	*0 *0
03435709 Beaver Dam Creek	Sulphur Fork Red River	Lat 36°31'28", long 86°45'47", Robertson County, at county road bridge 0.3 mile north of Owens Chapel, and at mile 5.6.	1.92	1976	10-13-76 7-21-77	* .06 * .04
03435713 Beaver Dam Creek	Sulphur Fork Red River	Lat 36°31'47", long 86°47'25", Robertson County, on private road 1.8 miles south of Hubertville, and at mile 3.8.	4.17	1976	10-13-76 7-21-77	* .18 * .31

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
03435721 Beaver Dam Creek Tributary	Beaver Dam Creek	Lat 36°33'15", long 86°45'06", Robertson County, at county road bridge 2.5 miles east of Hubertville.	0.17	1976	10-13-76 7-21-77	*0 *0
03435724 Beaver Dam Creek Tributary	Beaver Dam Creek	Lat 36°32'25", long 86°45'57", Robertson County, at county road bridge 1.4 miles north of Owens Chapel.	1.27	1976	10-13-76 7-21-77	*0 *0
03435727 Beaver Dam Creek Tributary	Beaver Dam Creek	Lat 36°31'59", long 86°47'04", Robertson County, at private bridge 2.0 miles southeast of Lakeview.	3.09	1976	10-13-76 7-21-77	*0 *0
03435729 Beaver Dam Creek	Sulphur Fork Red River	Lat 36°31'53", long 86°48'46", Robertson County, at county road bridge 0.6 mile south of State Fish Hatchery, 1.6 miles south of Lakeview and 4.4 miles north of Springfield.	9.73	1976	10-13-76 7-21-77	* .66 * .97
03435734 Fish Hatchery Branch	Beaver Dam Creek	Lat 36°31'54", long 86°48'46", Robertson County, at mouth, 0.6 mile south of Fish Hatchery, 4.4 miles northeast of Springfield.	2.42	1976	10-13-76 7-21-77	* .50 * .60
03435739 Beaver Dam Creek	Sulphur Fork Red River	Lat 36°31'40", long 86°49'29", Robertson County, at county road bridge 3.6 miles northeast of Springfield, and at mile 1.6.	12.9	1976	10-13-76 7-21-77	*1.6 *1.6
03435754 Sulphur Fork Red River Tributary	Sulphur Fork Red River	Lat 36°32'21", long 86°50'49", Robertson County, at county road bridge 2.3 miles southwest of Lakeview.	0.38	1976	10-13-76 7-21-77	* .07 *0
03435761 Sulphur Fork Red River Tributary	Sulphur Fork Red River	Lat 36°31'28", long 86°51'00", Robertson County, at bridge on State Highway 49, 2.2 miles northeast of Springfield, and at mile 0.1.	0.75	1976	10-13-76 7-21-77	* .11 * .11
03435772 Wartrace Creek	Sulphur Fork Red River	Lat 36°27'52", long 86°49'52", Robertson County, at bridge on county road east of Greenbrier Pike, 0.8 mile east of Courtland, 2.9 miles northwest of Greenbrier, and at mile 4.4.	1.65	1976	10-13-76 7-21-77	* .24 *0
03435775 Wartrace Creek	Sulphur Fork Red River	Lat 36°28'54", long 86°51'00", Robertson County, at bridge on Old Greenbrier Pike, 0.9 mile north of Courtland, 4.5 miles northwest of Greenbrier, and at mile 2.7.	4.08	1976	10-13-76 7-21-77	* .49 * .49
034 3780 Wa. race C k	Sulphur Fork Red River	Lat 36°29'44", long 86°50'54", Robertson County, at county road, 2.3 miles southeast of Springfield, and at mile 1.7.	5.61	1976	10-13-76 7-21-77	* .86 *1.1
03435785 Wartrace Creek	Sulphur Fork Red River	Lat 36°30'26", long 86°51'35", Robertson County, below Wartrace Lake dam, 1.4 miles east of Springfield, and at mile 0.6.	6.92	1976	10-13-76 7-21-77	* .54 *1.1

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
03435787 Wartrace Creek	Sulphur Fork Red River	Lat 36°30'46", long 86°52'00", Robertson County, 200 ft above mouth, 1.1 miles east of Springfield.	7.43	1976	10-13-76 7-21-77	*1.1 *1.7
03435788 Sulphur Fork Red River Tributary No. 2	Sulphur Fork Red River	Lat 36°31'07", long 86°52'09", Robertson County, at end of private road, 1.1 miles northeast of Springfield.	0.69	1976	10-13-76 7-21-77	* .03 * .05
03435789 Black Branch	Sulphur Fork Red River	Lat 36°31'05", long 86°52'57", Robertson County, at culvert on road to waterworks, and at mile 0.0.	1.02	1970, 1976	10-13-76 7-21-77	* .22 * .27
03435791 Sulphur Fork Red River Tributary No. 3	Sulphur Fork Red River	Lat 36°32'06", long 86°52'19", Robertson County, at county road bridge, 1.9 miles northeast of Youngville.	2.22	1976	10-13-76 7-21-77	*0 *0
03435793 Sulphur Fork Red River Tributary No. 3	Sulphur Fork Red River	Lat 36°32'04", long 86°52'18", Robertson County, 150 ft downstream from county road bridge, 1.9 miles northeast of Springfield and 2.0 miles west of Beards Chapel.	3.08	1976	10-13-76 7-21-77	* .05 * .19
03435796 Sulphur Fork Red River Tributary No. 3	Sulphur Fork Red River	Lat 36°31'20", long 86°53'03", Robertson County, at culvert under side road off U.S. Highway 41, 0.9 mile north of Springfield, 1.5 miles south of Mount Denson, and at mile 0.2.	4.10	1976	10-13-76 7-21-77	1.4 * .18
03435805 Sulphur Fork Red River Tributary No. 4	Sulphur Fork Red River	Lat 36°31'13", long 86°54'36", Robertson County, at first bridge above mouth, 2.0 miles east of Kinneys, 1.6 miles northwest of Springfield, and at mile 0.1.	1.54	1976	10-13-76 7-21-77	*0 *0
03435808 Sulphur Fork Red River Tributary No. 5	Sulphur Fork Red River	Lat 36°31'01", long 86°54'45", Robertson County, 200 ft above mouth, 1.6 miles west of Springfield.	.43	1976	10-13-76 7-21-77	*0 *0
03435820 Sulphur Fork Red River	Red River	Lat 36°30'20", long 86°56'38", Robertson County, 250 ft upstream from Carr Creek, 3.5 miles west of Springfield, and at mile 23.4.	87.2	1976	10-13-76 7-21-77	*9.4 *11
03435898 Browns Fork	Carr Creek	Lat 36°28'42", long 86°56'06", Robertson County, at county road bridge 100 ft southeast of State Highway 49, 3.5 miles southwest of Springfield, and at mile 0.5.	8.12	1976	7-21-77	*1.1
03435900 Carr Creek	Sulphur Fork Red River	Lat 36°28'54", long 86°55'45", Robertson County, at bridge on State Highway 49, 300 ft downstream from Browns Fork and 3.1 miles southwest of courthouse at Springfield.	32.0	1962-64, 1967-68, 1970-73, 1976	10-13-76 7-21-77	*4.3 *7.4
03435910 Carr Creek	Sulphur Fork Red River	Lat 36°30'12", long 86°56'28", Robertson County, 2.8 miles west of Springfield, and at mile 0.2.	36.8	1951, 1976	10-13-76 7-21-77	*6.3 *9.8

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River Basin				
03464650 Nolichucky River	French Broad River	Lat 36°07'24", long 82°26'37", Unicoi County, at bridge on U.S. Highways 19-W and 23, about 2 miles southwest of Erwin, and at mile 95.9.	639	1966, 1972, 1974-75	9- 1-77 9- 1-77	519 514
03466690 Little Chucky Creek	Nolichucky River	Lat 36°10'18", long 82°56'33", Greene County, about 0.35 mile downstream from Southern Railway bridge, 0.5 mile west of Radar.	16.2	1947	7-12-77 9- 2-77	6.2 *3.1
03467000 Lick Creek	Nolichucky River	Lat 36°12'05", long 83°02'52", Greene County, 100 ft upstream from county highway bridge, 0.2 mile east of Mohawk, 0.6 mile upstream from Riley Creek, and at mile 17.4.	220	1946-71‡	9- 2-77	35
03468195 Rimmer Creek	French Broad River	Lat 36°01'59", long 83°24'34", Jefferson County, at bridge on State Highway 66 at Dandridge, 0.8 mile above mouth.	3.07	1967-68	11-15-76	*1.1
03468196 Rimmer Creek	French Broad River	Lat 36°01'39", long 83°23'52", Jefferson County, at bridge on U.S. Highway 70, 1.1 mile northeast of Dandridge.	3.48	1976	11-15-76	*1.9
03469112 Webb Creek	Little Pigeon River	Lat 35°45'39", long 83°21'20", Sevier County, just downstream from Darky Branch, 3.0 miles above mouth, 3 miles east of Pittman Center.	11.2	1972, 1974-76	10-16-76	8.4
03487548 Reedy Creek	South Fork Holston River	Lat 36°34'00", long 82°27'05", Sullivan County, 50 ft upstream from U.S. Highway 11W bridge, 0.1 mile upstream from gaging station 03487550, 5.2 miles northeast of Kingsport.	36.3	-	11-17-76	14
03487558 Clark Branch tributary	Clark Branch	Lat 36°34'21", long 82°29'44", Sullivan County, at Cherokee Rod and Gun Club, 800 ft above dam, 1.3 miles north of U.S. Highway 11E, 3.8 miles northeast of Kingsport.	0.45	1972, 1974-76	11-17-76	*.23
03490210 Holston River	Tennessee River	Lat 36°31'49", long 82°36'33", Sullivan County, 1.2 miles downstream from confluence of North and South Forks of Holston River, 200 ft downstream from Holston Defense Corporation water intake, 3.8 miles west of Kingsport.	2,779	1953	7- 7-77 7- 7-77 7- 7-77 7- 8-77 7- 8-77	1,440 1,280 3,910 9,030 8,610
03494750 Richland Creek	Holston River	Lat 36°16'25", long 83°31'47", Grainger County, 0.25 mile south of U.S. Highway 11W, 1 mile southwest of Rutledge.	19.9	1968, 1975-76	11-17-76	*5.0
03593098 Robinson Creek	Tennessee River	Lat 35°02'54", long 88°15'05", Hardin County, at bridge on State Highway 57, 1.3 miles northeast of Counce.	4.78	-	6-20-77 7-26-77 8-24-77	*2.0 *1.4 *1.3

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1977--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin--Continued				
03596085 Crumpton Creek	Duck River	Lat 35°24'38", long 86°07'16", Coffee County, at bridge on State Highway 55, 5.0 miles southwest of Manchester.	16.5	-	4- 4-77	2,960
03602198 East Piney River	Piney River	Lat 36°03'42", long 87"23'46", Dickson County, at sewage treatment plant, 0.9 mile southwest of Dickson.	3.31	-	6-13-77	*.89
		Obion River basin				
07026800 Indian Creek	Reelfoot Lake	Lat 36°23'09", long 89°20'35", Obion County, at bridge on State Highway 22, 0.8 mile northeast of Samburg.	8.41	1975-76	8-24-77	*.80
07027495 Bond Creek	South Fork Forked Deer River	Lat 35°34'29", long 88°48'46", Madison County, at Herron Grove Road bridge, 200 ft east of Bemis.	4.85	1968, 1972, 1974, 1976	6- 1-77	.34
		Hatchie River basin				
07029410 Mosses Creek	Hatchie River	Lat 35°04'46", long 88°46'56", McNairy County, at county road bridge 1.9 miles downstream from Kirk Branch, 2.2 miles northeast of Pocahontas.	47.6	1959-61, 1963-64	3- 3-77 3- 4-77 3- 4-77 3- 9-77 9-13-77 9-24-77 9-24-77 9-25-77 9-25-77	347 1,260 2,980 82 9.6 62 179 251 552
07029425 Hatchie River	Mississippi River	Lat 35°07'35", long 88°48'48", Hardeman County, at county road bridge, 0.85 mile downstream from Lee Creek, 2.7 miles northeast of Lacy.	1,033	-	3- 3-77 3- 6-77 3- 7-77 3- 9-77 9-13-77 9-24-77 9-25-77 9-26-77	4,610 22,200 18,200 9,660 105 333 2,100 2,710
07030010 Big Muddy Creek	Hatchie River	Lat 35°27'02", long 89°22'35", Haywood County, at county road bridge, 1.6 miles southeast of Stanton.	84.4	-	1-31-77 3- 3-77 3- 3-77 3- 4-77 3-10-77 9-12-77 9-24-77 9-24-77 9-24-77 9-25-77 9-25-77 9-26-77	30 326 800 3,080 42 25 46 428 663 686 719 333
07030050 Hatchie River	Mississippi River	Lat 35°38'14", long 89°36'14", Lauderdale County, at bridge on U.S. Highway 51, 0.9 mile north of Rialto and at mile 34.0.	2,308	1939-76[e]	2-10-77 3- 7-77 3- 8-77 9-12-77 9-28-77	1,620 8,080 10,400 451 2,930

* Base flow.
† Peak flow.
‡ Operated as a continuous-record station.
a Operated as a continuous-record station below 150 ft^3/s; records published elsewhere in this report.
b Not previously published.
c Corrected.
d Estimated.
e Operated as a continuous-record station by Corps of Engineers.

Springs

In 1931 a study of large springs in Tennessee was made and the results published in WSP 713. From 1950 to 1954 a more detailed study, including some of these springs, was made. Results of this study and all subsequent spring measurements were published annually in WSP's from 1950 to 1960. Since 1960 results of measurements have been published in annual State reports. Daily mean discharges for Jack Daniel Spring at Lynchburg since 1970 have been published in the annual State reports.

Spring measurements made in the 1977 water year include 13 springs in Robertson County which are a part of a low-flow hydrology study of Sulphur Fork Red River and tributaries in the vicinity of Springfield. The 13 springs measured in Rutherford County are part of a continuing study of the ground water resources of the Murfreesboro area. The results of measurements showing the discharge, and in some instances, water temperature and specific conductance are given in the following table.

Discharge measurements of springs during water year 1977

Site number and name	Location	Tributary to--	Date	Discharge (gpm)	Temp. (°C) Water	Specific Conductance (umhos at 25°C)
		Robertson County				
03435619 Baggettsville	Lat 36°28'35", long 86°43'32", 50 ft south of State Highway 76, at Baggettsville, 0.8 mile west of Oakdale, 4.1 miles west of Cross Plains.	Sulphur Fork tributary to Sulphur Fork	10-13-76 7-21-77	25 65	- -	- -
03435114 Dorris Spring	Lat 36°30'44", long 86°42'49", 200 ft west of Red Factory Road in Chote Hollow, 2.7 miles southwest of Cross Plains.	Empson Branch tributary to Empson Branch to Honey Run to South Fork Red River	7-21-77	20	-	-
03435792 Dry Bridge	Lat 36°32'05", long 86°52'22", 200 ft south of county road, 1.7 miles north of Springfield.	Sulphur Fork Creek tributary to Sulphur Fork Creek	10-13-76 7-21-77	40 35	- -	- -
03435755 Hallman	Lat 36°32'08", long 86°51'29", 100 ft north of county road, 1.3 miles southwest of Beards Chapel, 2.0 miles northwest of Springfield.	Nearby Sinkhole	10-13-76 7-21-77	20 40	- -	- -
362837086455300 Joe Pitt	Lat 36°28'37", long 86°45'53", 20 ft north of State Highway 76, 0.2 mile southeast of Bethlehem, 3.4 miles northeast of Greenbrier.	Savage Branch to Sulphur Fork Creek	10-13-76 7-21-77	0 0	- -	- -
03435612 Maddox	Lat 36°27'14", long 86°44'49", 400 ft south of county road 1.9 miles southwest of Mount Pleasant School, 3.2 miles northeast of Greenbrier.	Sulphur Fork Creek	10-13-76 7-21-77	5 <1	- -	- -
03435728 Owens	Lat 36°32'12", long 86°47'34", 400 ft south of county road leading westward from I-65 to State Fish Hatchery, 4.5 miles northwest of Springfield.	Beaver Dam Creek to Sulphur Fork Creek	10-13-76 7-21-77	130 250	- -	- -
03435113 Park No. 1	Lat 36°30'25", long 86°41'36", 100 ft south of county road, 0.2 mile upstream from Frey Branch, 2.9 miles south of Cross Plains.	Empson Branch tributary to Empson Branch to Honey Run to South Fork Red River	10-13-76 7-21-77	1 <1	- -	- -
03435112 Park No. 2	Lat 36°30'24", long 86°41'38", 100 ft south of county road, 0.3 mile upstream from Frey Branch, 2.9 miles south of Cross Plains.	Empson Branch tributary to Empson Branch to Honey Run to South Fork Red River	10-13-76 7-21-77	30 8	- -	- -

Discharge measurements of springs during water year 1977--Continued

Site number and name	Location	Tributary to--	Date	Discharge (gpm)	Temp. (°C) Water	Specific Conductance (umhos at 25°C)
		Robertson County--Continued				
03435732 Pitt Bros. Distillery	Lat 36°32'28", long 86°48'43", 100 ft behind abandoned distillery, 400 ft east of State Fish Hatchery, 3.9 miles northeast of Springfield.	Beaver Dam Creek tributary to Beaver Dam Creek to Sulphur Fork Creek	10-13-76 7-21-77	60 60	- -	- -
03435731 State Fish Hatchery	Lat 36°32'33", long 86°48'58", 100 ft north of State Fish Hatchery, 200 ft south of county road, 3.8 miles northeast of Springfield.	Beaver Dam Creek tributary to Beaver Dam Creek to Sulphur Fork Creek	10-13-76 7-21-77	160 190	- -	- -
03435605 Strickland	Lat 36°27'56", long 86°41'37", 200 ft west of county road 1.3 miles southeast of Oakdale, 2.5 miles west of White House.	Sulphur Fork Creek tributary to Sulphur Fork Creek	10-13-76 7-21-77	9 0	- -	- -
03435773 Wartrace Creek	Lat 36°27'52", long 86°49'52", near intersection of county road and Greenbrier Pike, on left bank of Wartrace Creek, 2.1 miles southeast of Springfield.	Wartrace Creek to Sulphur Fork Creek	10-13-76 7-21-77	150 125	- -	- -
		Rutherford County				
03427730 Allen Spring	Lat 35°55'35", long 86°23'44", 1.9 miles southwest of Walterhill.	East Fork Stones River	6- 2-77	a5	-	-
03428390 Asbury Pike Spring	Lat 35°53'17", long 86°28'06", 1.5 miles west of Mt. Olive.	Overall Creek to West Fork Stones River	6- 2-77	0	-	-
03427649 Double Spring	Lat 35°44'57", long 86°20'09", at Double Springs.	Double Spring Branch to Sinkhole	6- 1-77	0	-	-
03428047 Fox Camp Spring	Lat 35°48'15", long 86°20'52", 1.0 mile north of Mankinville, 3.7 miles southeast of Courthouse in Murfreesboro.	Todd Lake	6- 1-77 9- 1-77	260 165	25.5 21.0	300 650
03428514 Leanna Spring	Lat 35°56'20", long 86°26'22", 200 ft south of Sulphur Springs Road, 0.5 mile west of Leanna, and 3.5 miles west of Walterhill.	Sinkhole	6- 2-77	0	-	-
03428126 McFadden Spring	Lat 35°53'19", long 86°25'28", on left bank of West Fork Stones River, 3.5 miles northwest of the Courthouse in Murfreesboro.	West Fork Stones River	6- 2-77	0	-	-
03428383 Military Springs	Lat 35°52'36", long 86°28'06", on I-24, 4.4 miles above mouth of Overall Creek, 2.0 miles west of Stones River National Military Park.	Overall Creek to West Fork Stones River	6- 1-77	0	-	-
03428182 Oaklands Spring	Lat 35°51'18", long 86°23'00", in Oaklands Park, 0.8 mile northeast of the Courthouse in Murfreesboro.	Sinking Creek to West Fork Stones River	6- 2-77	210	16.0	520

a estimated.

Discharge measurements of springs during water year 1977--Continued

Site number and name	Location	Tributary to--	Date	Discharge (gpm)	Temp. (°C) Water	Specific Conductance (umhos at 25°C)
		Rutherford County--Continued				
03428301 Overall Spring	Lat 35°48'10", long 86°31'20", at head of Overall Creek, 1.3 miles north of Jarrett Knob, 1.9 miles east of Windrow, and 3.35 miles north of Rockvale.	Overall Creek to West Fork Stones River	6- 1-77	390	17.0	440
03428317 Rucker Spring	Lat 35°49'40", long 86°29'20", 1,000 ft west of Overall Creek, 1.4 miles northwest of Salem and 5.6 miles west of Murfreesboro.	Overall Creek to West Fork Stones River	6- 1-77	1,700	14.5	430
03428300 Snail Shell Cave Spring	Lat 35°46'57", long 86°32'11", 0.5 mile west of Jarrett Knob, 1.75 miles north of Rockvale, 10 miles west of Murfreesboro.	Overall Creek to West Fork Stones River	6- 2-77	50	14.5	410
03427709 V.A. Hospital Spring	Lat 35°55'03", long 86°22'59", at V.A. Hospital, 2.2 miles south of Walterhill.	East Fork Stones River	6- 2-77	920	22.0	420
03428516 Wilkinson Spring	Lat 35°56'43", long 86°27'15", 100 ft west of county road, 100 ft north of Wilkinson well, 1.5 miles northwest of Leanna and 4.3 miles west of Walterhill.	Sinkhole	6- 2-77	625	15.5	395

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek

A series of discharge measurements was made Oct. 12, 13, 1976, on Sulphur Fork Red River and tributaries in the vicinity of Springfield to define the low-flow hydrology, the losing and gaining reaches, and the quality of water at base flow conditions. The reach studied included the main-stem and major tributaries from mile 23.3 (37.5 km) to the headwaters of Sulphur Fork Red River. The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
42.6	03435570 Sulphur Fork Red River	Lat 36°26'49", long 86°44'13", Robertson County, at county road bridge 2.3 miles southwest of Oakdale.	4.55	1.18	-	-	14.0	300	8.3	10.2
42.1	03435580 Mill Branch	Lat 36°27'07", long 86°40'29", Robertson County, just downstream from U.S. Highway 31-W bridge, 1.8 miles southwest of White House, and at mile 4.5.	.43	.001[a]	-	-	-	-	-	-
42.1	03435590 Mill Branch	Lat 36°26'50", long 86°41'27", Robertson County, at county road bridge 2.2 miles southeast of Oakdale, and at mile 3.4.	1.53	.11	+.109	-	16.0	280	8.0	8.5
42.1	03435600 Mill Branch	Lat 36°26'53", long 86°42'53", Robertson County, at county road bridge 3.7 miles southwest of White House, and at mile 1.7.	3.50	.45	+.34	-	15.5	285	8.1	9.8
42.1	03435602 Moss Branch	Lat 36°27'32", long 86°41'35", Robertson County, at county road bridge 2.4 miles west of White House, and at mile 2.9.	.48	0	-	-	-	-	-	-
42.1	03435604 Moss Branch	Lat 36°28'07", long 86°41'32", Robertson County, at county road bridge at Warren Cemetery, 2.2 miles west of White House.	.17	0	-	-	-	-	-	-
42.1	03435606 Moss Branch	Lat 36°26'37", long 86°42'56", Robertson County, at county road bridge, 1.0 miles south of Oakdale, 3.6 miles west of White House, and at mile 1.5.	1.98	.15	+.15	-	14.0	450	8.3	9.1
41.8	03435610 Sulphur Fork Red River	Lat 36°27'24", long 86°44'44", Robertson County, at county road bridge 1.7 miles southwest of Baggettsville and 5.2 miles west of White House.	12.5	2.74	-	+.96	12.5	315	8.0	8.1
41.4	03435614 Peyton Branch	Lat 36°26'40", long 86°45'09", Robertson County, at county road bridge 3.4 miles north of Ridgetop, and at mile 1.3.	1.68	.20	-	-	21.0	250	8.8	9.6

a Estimated.

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
41.4	03435616 Peyton Branch Tributary	Lat 36°26'39", long 86°45'07", Robertson County, just above mouth 2.4 miles north of Ridgetop.	.39	.02	-	-	16.0	250	8.2	9.1
41.4	03435618 Peyton Branch	Lat 36°27'09", long 86°44'58", Robertson County, 300 feet east of county road 2.0 miles southwest of Baggettsville, and at mile .6.	2.36	.22	0	-	13.0	285	8.1	8.2
40.0	03435620 Sulphur Fork Red River	Lat 36°28'00", long 86°46'12", Robertson County, 200 ft above Long Branch and 4.8 miles north of Ridgetop.	19.1	3.54	-	+.58	14.0	295	8.3	9.5
39.9	03435623 Pole Bridge Branch Tributary No. 3	Lat 36°24'44", long 86°45'37", Robertson County, at bridge on Lake Road, 1.2 miles northeast of Ridgetop,and at mile 0.3.	.43	.1[a]	-	-	14.0	270	8.0	6.2
39.9	03435625 Pole Bridge Branch	Lat 36°24'50", long 86°46'02", Robertson County, at county road bridge below Ridgetop Lake, 1.2 miles north of Ridgetop,and at mile 1.8.	1.34	.17	-	-	21.0	200	7.7	5.5
39.9	03435627 Pole Bridge Branch	Lat 36°25'18", long 86°46'46", Robertson County, at bridge on Kelley Willis Road, 1.4 miles east of Greenbrier, and at mile 0.9.	3.21	.43	+.26	-	17.5	260	8.5	9.1
39.9	03435629 Pole Bridge Branch Tributary No. 2	Lat 36°26'08", long 86°47'12", Robertson County, at bridge on Old Still House Road, 1.1 miles northeast of Greenbrier and 150 ft above the mouth.	.10	0	-	-	-	-	-	-
39.9	03435631 Long Branch[b/]	Lat 36°26'08", long 86°46'50", Robertson County, 600 ft below dam of Greenbrier Lake, 1.4 miles east of Greenbrier, and at mile 2.6.	.52	.37	-.06	-	19.5	275	8.2	8.2
39.9	03435634 Long Branch	Lat 36°27'59", long 86°46'24", Robertson County, 200 ft above mouth, 100 ft west of Old Still House Road, 3.2 miles northeast of Greenbrier,and at mile 0.	9.56	1.18	+.81	-	13.5	280	8.1	8.9

a Estimated.
b Same stream as Pole Bridge Branch.

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
39.0	03435635 Savage Branch	Lat 36°28'38", long 86°46'04", Robertson County, 250 ft south of junction of State Highway 76 and Bethlehem Road, 3.9 miles northeast of Greenbrier, and at mile 0.8.	1.76	.16	-	-	14.0	375	8.4	8.2
38.0	03435637 Sulphur Fork Red River	Lat 36°29'05", long 86°47'33", Robertson County, at bridge on State Highway 76, 0.8 miles upstream from Santee Creek, 5.2 miles east of courthouse at Springfield.	34.9	4.84	-	-.04	-	-	-	-
37.4	03435644 Santee Creek	Lat 35°30'10", long 86°45'46", Robertson County, at county road bridge, 4.1 miles southeast of Hubertville, and at mile 1.9.	2.60	.24	-	-	13.0	480	7.8	7.3
37.4	03435647 Santee Creek	Lat 36°30'05", long 86°45'48", Robertson County, at county road bridge 250 ft above mouth and 4.2 miles southeast of Hubertville, and at mile 0.1.	.91	.13	-.11	-	13.0	500	7.7	7.5
37.4	03435650 Santee Creek	Lat 36°29'51", long 86°46'41", Robertson County, at county road bridge, 6.0 miles east of Springfield and 5.0 miles north of Greenbrier, and at mile 0.8.	5.13	.57	+.44	-	14.5	365	8.5	8.6
32.9	03435700 Sulphur Fork Red River	Lat 36°30'53", long 86°50'46", Robertson County, at ford on private road on the Will Irons farm, 1.0 miles upstream from the mouth of Beaver Dam Creek, and 2.4 miles northeast of Springfield.	49.1	8.24	-	+2.83	-	-	-	-
32.0	03435705 Beaver Dam Creek	Lat 36°31'25", long 86°44'43", Robertson County, at county road bridge, 0.4 miles north of Eden Corner and 3.2 miles southwest of Cross Plains, and at mile 6.7.	.83	0	-	-	-	-	-	-
32.0	03435709 Beaver Dam Creek	Lat 36°31'28", long 86°45'47", Robertson County, at county road bridge, 0.3 miles north of Owens Chapel, and at mile 5.6.	1.92	.60	+.60	-	13.5	280	7.4	7.4

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
32.0	03435713 Beaver Dam Creek	Lat 36°31'47", long 86°47'25", Robertson County, beside private road, 1.8 miles south of Hubertville, and at mile 3.8.	4.17	.18	-.42	-	13.5	320	7.4	5.7
32.0	03435721 Beaver Dam Creek Tributary No. 1	Lat 36°33'15", long 86°45'06", Robertson County, at county road bridge, 2.5 miles east of Hubertville.	.17	0	-	-	-	-	-	-
32.0	03435724 Beaver Dam Creek Tributary No. 1	Lat 36°32'25", long 86°45'57", Robertson County, at county road bridge, 1.4 miles north of Owens Chapel.	1.27	0	-	-	-	-	-	-
32.0	03435727 Beaver Dam Creek Tributary No. 1	Lat 36°31'59", long 86°47'04", Robertson County, at private bridge 2.0 miles southeast of Lakeview.	3.09	0	-	-	-	-	-	-
32.0	03435729 Beaver Dam Creek	Lat 36°31'53", long 86°48'46", Robertson County, at county road bridge 0.6 miles south of State Fish Hatchery and 1.6 miles south of Lakeview, 4.4 miles northeast of Springfield, and at mile 2.4.	9.73	.66	+.48	-	14.0	360	8.0	6.4
32.0	03435734 Fish Hatchery Branch	Lat 36°31'54", long 86°48'46", Robertson County, just above mouth, 0.6 miles south of fish hatchery and 4.4 miles northeast of Springfield.	2.42	.50	-	-	15.5	410	8.0	8.3
32.0	03435739 Beaver Dam Creek	Lat 36°31'40", long 86°49'29", Robertson County, at county road bridge, 3.6 miles northeast of Springfield, and at mile 1.6.	12.9	1.59	+.43	-	14.5	360	8.0	6.8
32.0	03435750 Beaver Dam Creek	Lat 36°31'32", long 86°50'32", Robertson County, at private drive 150 ft east of Hwy. 49, 1.7 miles northeast of Springfield, and at mile 0.4.	14.2	1.34	-.25	-	-	-	-	-
31.9	03435754 Sulphur Fork Red River Tributary No. 1	Lat 36°32'21", long 86°50'49", Robertson County, at county road bridge, 2.3 miles southwest of Lakeview.	.38	.07	-	-	-	-	-	-

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
31.9	03435761 Sulphur Fork Red River Tributary No. 1	Lat 36°31'28", long 86°51'00", Robertson County, at bridge on State Highway 49, 2.2 miles northeast of Springfield, and at mile 0.1.	.75	.11	+.04	-	15.5	400	8.0	5.4
30.8	03435770 Sulphur Fork Red River	Lat 36°30'47", long 86°51'44", Robertson County, on left bank 150 ft downstream from new bridge on State Highway 49, 1.3 mi northeast of Springfield, and at mile 30.8.	65.6	13.0	-	+3.31	-	-	-	-
30.6	03435772 Wartrace Creek	Lat 36°27'52", long 86°49'52", Robertson County, at bridge on county road, just east of Greenbrier Pike, 0.8 miles east of Courtland, 2.9 miles northwest of Greenbrier, and at mile 4.4.	1.65	0	-	-	-	-	-	-
30.6	03435775 Wartrace Creek	Lat 36°28'54", long 86°51'00", Robertson County, at bridge on Old Greenbrier Pike, 0.9 miles north of Courtland, 4.5 miles northwest of Greenbrier, and at mile 2.7.	4.08	.50	+.50	-	16.5	370	8.2	9.4
30.6	03435780 Wartrace Creek	Lat 36°29'44", long 86°51'35", Robertson County, beside county road 2.3 miles southeast of Springfield, and at mile 1.7.	5.61	.86	+.36	-	15.0	385	8.4	8.8
30.6	03435785 Wartrace Creek	Lat 36°30'26", long 86°52'00", Robertson County below Wartrace Lake Dam, 1.4 miles east of Springfield, and at mile 0.6.	6.92	.54	-.32	-	21.0	220	8.0	5.8
30.6	03435787 Wartrace Creek	Lat 36°30'46", long 86°52'00", Robertson County, 200 ft above mouth, 1.1 miles east of Springfield, and at mile 0.0.	7.43	1.07	+.53	-	17.5	370	7.9	5.4
29.9	03435788 Sulphur Fork Red River Tributary No. 2	Lat 36°31'07", long 86°52'09", Robertson County, at end of private road, 1.1 miles northeast of Springfield.	.69	.03	-	-	18.0	420	7.9	5.0
29.4	03435789 Black Branch	Lat 36°31'05", long 86°52'57", Robertson County, at culvert on road to waterworks, and at mile 0.0.	1.02	.27	-	-	10.5	680	7.6	7.4

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
29.2	03435791 Sulphur Fork Red River Tributary No. 3	Lat 36°32'06", long 86°52'19", Robertson County, at county road bridge, 1.9 miles northeast of Youngville.	2.22	0	-	-	-	-	-	-
29.2	03435793 Sulphur Fork Red River Tributary No. 3	Lat 36°32'04", long 86°52'18", Robertson County, 150 ft downstream from county road bridge, 100 ft downstream from spring Number 11, 1.9 miles northeast of Springfield and 2.0 miles west of Beards Chapel.	3.08	.05	+.05	-	14.5	500	7.6	7.0
29.2	03435796 Sulphur Fork Red River Tributary No. 3	Lat 36°31'20", long 86°53'03", Robertson County, culvert under side road off U. S. Highway 41, 0.9 miles north of Springfield, 1.5 miles south of Mount Denson, and at mile 0.2.	4.10	1.43	+1.38	-	12.5	1800	7.6	8.4
29.1	03435800 Sulphur Fork Red River	Lat 36°31'15", long 86°53'11", Robertson County, at Old Hwy. 41 bridge 0.85 miles northwest of courthouse in Springfield, and at mile 29.1.	79.9	11.4	-	-4.40	-	-	-	-
27.1	03435805 Sulphur Fork Red River Tributary No. 4	Lat 36°31'13", long 86°54'36", Robertson County, at first bridge above mouth, 2.0 miles east of Kinneys and 1.6 miles northwest of Springfield, and at mile 0.1.	1.54	0	-	-	-	-	-	-
26.7	03435808 Sulphur Fork Red River Tributary No. 5	Lat 36°31'01", long 86°54'45", Robertson County, 200 ft above mouth, 1.6 miles west of Springfield, and at mile 0.0.	.43	0	-	-	-	-	-	-
26.7	03435810 Sulphur Fork Red River	Lat 36°30'59", long 86°54'46", Robertson County, at county road bridge 1.3 miles northwest of Springfield, and at mile 26.7.	84.5	11.5	-	+.10	-	-	-	-
23.4	03435820 Sulphur Fork Red River	Lat 36°30'20", long 86°56'38", Robertson County, 250 ft above Carr Creek, 3.5 miles west of Springfield.	87.2	9.45	-	-2.05	11.0	-	7.3	5.2

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/1)
23.3	03435898 Browns Fork	Lat 36°28'42", long 86°56'06", Robertson County, at county road bridge 100 ft southeast of State Highway 49, 3.5 miles southwest of Springfield, and at mile 0.5.	8.12	-	-	-	-	-	-	-
23.3	03435900 Carr Creek	Lat 36°28'54", long 86°55'45", Robertson County, at bridge on State Highway 49, 300 ft downstream from Browns Fork, and 3.1 miles southwest of courthouse at Springfield.	32.0	4.31	-	-	12.5	305	8.5	8.0
23.3	03435910 Carr Creek	Lat 36°30'12", long 86°56'28", Robertson County, 2.8 miles west of Springfield, and at mile 0.2.	36.8	6.29	+1.98	-	10.0	-	7.7	8.2
		Overall net gain or loss				+1.29				

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek

A series of discharge measurements was made July 21, 1977, on Sulphur Fork Red River and tributaries in the vicinity of Springfield to define the low-flow hydrology, the losing and gaining reaches, and the quality of water at base flow conditions. The reach studied included the main-stem and major tributaries from mile 23.3 (37.5 km) to the headwaters of Sulphur Fork Red River. The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
42.6	03435570 Sulphur Fork Red River	Lat 36°26'49", long 86°44'13", Robertson County, at county road bridge 2.3 miles southwest of Oakdale.	4.55	.62	-	-	-	-	-	-
42.1	03435580 Mill Branch	Lat 36°27'07", long 86°40'29", Robertson County, just downstream from U.S. Highway 31-W bridge, 1.8 miles southwest of White House, and at mile 4.5.	.43	0	-	-	-	-	-	-
42.1	03435590 Mill Branch	Lat 36°26'50", long 86°41'27", Robertson County, at county road bridge 2.2 miles southeast of Oakdale, and at mile 3.4.	1.53	.04	+.04	-	-	-	-	-
42.1	03435600 Mill Branch	Lat 36°26'53", long 86°42'53", Robertson County, at county road bridge 3.7 miles southwest of White House, and at mile 1.7.	3.50	.32	+.28	-	-	-	-	-
42.1	03435602 Moss Branch	Lat 36°27'32", long 86°41'35", Robertson County, at county road bridge 2.4 miles west of White House, and at mile 2.9.	.48	0	-	-	-	-	-	-
42.1	03435604 Moss Branch	Lat 36°28'07", long 86°41'32", Robertson County, at county road bridge at Warren Cemetery, 2.2 miles west of White House.	.17	0	-	-	-	-	-	-
42.1	03435606 Moss Branch	Lat 36°26'37", long 86°42'56", Robertson County, at county road bridge, 1.0 miles south of Oakdale, 3.6 miles west of White House, and at mile 1.5.	1.98	.13	+.13	-	-	-	-	-
41.8	03435610 Sulphur Fork Red River	Lat 36°27'24", long 86°44'44", Robertson County, at county road bridge 1.7 miles southwest of Baggettsville and 5.2 miles west of White House.	12.5	4.74	-	+3.67	-	-	-	-

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
41.4	03435614 Peyton Branch	Lat 36°26'40", long 86°45'09", Robertson County, at county road bridge 3.4 miles north of Ridgetop, and at mile 1.3.	1.68	.09	-	-	-	-	-	-
41.4	03435616 Peyton Branch Tributary	Lat 36°26'39", long 86°45'07", Robertson County, just above mouth 2.4 miles north of Ridgetop.	.39	.02	-	-	-	-	-	-
41.4	03435618 Peyton Branch	Lat 36°27'09", long 86°44'58", Robertson County, 300 feet east of county road 2.0 miles southeast of Baggettsville, and at mile .6.	2.36	.12	+.01	-	-	-	-	-
40.0	03435620 Sulphur Fork Red River	Lat 36°28'00", long 86°46'12", Robertson County, 200 ft above Long Branch and 4.8 miles north of Ridgetop.	19.1	2.04	-	-2.82	-	-	-	-
39.9	03435623 Pole Bridge Branch Tributary No. 3	Lat 36°24'44", long 86°45'37", Robertson County, at bridge on Lake Road, 1.2 miles northeast of Ridgetop, and at mile 0.3.	.43	.02[a]	-	-	-	-	-	-
39.9	03435625 Pole Bridge Branch	Lat 36°24'50", long 86°46'02", Robertson County, at county road bridge below Ridgetop Lake, 1.2 miles north of Ridgetop, and at mile 1.8.	1.34	.07[a]	-	-	-	-	-	-
39.9	03435627 Pole Bridge Branch	Lat 36°25'18", long 86°46'46", Robertson County, at bridge on Kelley Willis Road, 1.4 miles east of Greenbrier, and at mile 0.9.	3.21	.11	+.04	-	-	-	-	-
39.9	03435629 Pole Bridge Branch Tributary No. 2	Lat 36°26'08", long 86°46'50", Robertson County, at bridge an Old Still House Road, 1.1 miles northeast of Greenbrier and 150 ft above the mouth.	.10	.01[a]	-	-	-	-	-	-
39.9	03435631 Long Branch [b]	Lat 36°26'08", long 86°46'50", Robertson County, 600 ft below dam of Greenbrier Lake, 1.4 miles east of Greenbrier, and at mile 2.6.	.52	.18	+.06	-	-	-	-	-
39.9	03435634 Long Branch	Lat 36°27'59", long 86°46'24", Robertson County, 200 ft above mouth, 100 ft west of Old Still House Road, 3.2 miles northeast of Greenbrier, and at mile 0.	9.56	.44	+.26	-	-	-	-	-

a Estimated.

b Same stream as Pole Bridge Branch.

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
39.0	03435635 Savage Branch	Lat 36°28'38", long 86°46'04", Robertson County, 250 ft south of junction of State Highway 76 and Bethlehem Road, 3.9 miles northeast of Greenbrier, and at mile 0.8.	1.76	.09	-	-	-	-	-	-
38.0	03435637 Sulphur Fork Red River	Lat 36°29'05", long 86°47'33", Robertson County, at bridge on State Highway 76, 0.8 miles upstream from Santee Creek, 5.2 miles east of courthouse at Springfield.	34.9	4.11	-	+1.54	-	-	-	-
37.4	03435644 Santee Creek	Lat 35°30'10", long 86°45'46", Robertson County, at county road bridge, 4.1 miles southeast of Hubertville, and at mile 1.9.	2.60	.37	-	-	23.0	560	8.0	6.4
37.4	03435647 Santee Creek	Lat 36°30'05", long 86°45'48", Robertson County, at county road bridge 250 ft above mouth and 4.2 miles southeast of Hubertville, and at mile 0.1.	.91	.08	-.29	-	23.0	650	7.9	6.5
37.4	03435650 Santee Creek	Lat 36°29'51", long 86°46'41", Robertson County, at county road bridge, 6.0 miles east of Springfield and 5.0 miles north of Greenbrier, and at mile 0.8.	5.13	.85	+.77	-	-	-	-	-
32.9	03435700 Sulphur Fork Red River	Lat 36°30'53", long 86°50'46", Robertson County, at ford on private road on the Will Irons farm, 1.0 miles upstream from the mouth of Beaver Dam Creek, and 2.4 miles northeast of Springfield.	49.1	9.8	-	+4.84	-	-	-	-
32.0	03435705 Beaver Dam Creek	Lat 36°31'25", long 86°44'43", Robertson County, at county road bridge, 0.4 miles north of Eden Corner and 3.2 miles southwest of Cross Plains, and at mile 6.7.	.83	0	-	-	-	-	-	-
32.0	03435709 Beaver Dam Creek	Lat 36°31'28", long 86°45'47", Robertson County, at county road bridge, 0.3 miles north of Owens Chapel, and at mile 5.6.	1.92	.04	+.04	-	26.0	440	7.7	4.5

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary Sulphur Fork gain or loss	Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/1)
32.0	03435713 Beaver Dam Creek	Lat 36°31'47", long 86°47'25", Robertson County, beside private road, 1.8 miles south of Hubertville, and at mile 3.8.	4.17	.31	+2.70	-	24.5	480	7.7	5.9
32.0	03435721 Beaver Dam Creek Tributary No. 1	Lat 36°33'15", long 86°45'06", Robertson County, at county road bridge, 2.5 miles east of Hubertville.	.17	0	-	-	-	-	-	-
32.0	03435724 Beaver Dam Creek Tributary No. 1	Lat 36°32'25", long 86°45'57", Robertson County, at county road bridge, 1.4 miles north of Owens Chapel.	1.27	0	-	-	-	-	-	-
32.0	03435727 Beaver Dam Creek Tributary No. 1	Lat 36°31'59", long 86°47'04", Robertson County, at private bridge, 2.0 miles southeast of Lakeview.	3.09	0	-	-	-	-	-	-
32.0	03435729 Beaver Dam Creek	Lat 36°31'53", long 86°48'46", Robertson County, at county road bridge 0.6 miles south of State Fish Hatchery and 1.6 miles south of Lakeview, 4.4 miles northeast of Springfield, and at mile 2.4.	9.73	.97	+.66	-	25.5	480	8.1	7.9
32.0	03435734 Fish Hatchery Branch	Lat 36°31'54", long 86°48'46", Robertson County, just above mouth, 0.6 miles south of fish hatchery and 4.4 miles northeast of Springfield.	2.42	.60	-	-	24.5	560	8.1	5.0
32.0	03435739 Beaver Dam Creek	Lat 36°31'40", long 86°49'29", Robertson County, at county road bridge, 3.6 miles northeast of Springfield, and at mile 1.6.	12.9	1.59	+.02	-	25.0	540	8.2	8.0
32.0	03435750 Beaver Dam Creek	Lat 36°31'32", long 86°50'32", Robertson County, at private drive 150 ft east of Hwy. 49, 1.7 miles northeast of Springfield, and at mile 0.4.	14.2	2.16	+.57	-	-	-	-	-
31.9	03435754 Sulphur Fork Red River Tributary No. 1	Lat 36°32'21", long 86°50'49", Robertson County, at county road bridge, 2.3 miles southwest of Lakeview.	.38	0	-	-	-	-	-	-

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
31.9	03435761 Sulphur Fork Red River Tributary No. 1	Lat 36°31'28", long 86°51'00", Robertson County, at bridge on State Highway 49, 2.2 miles northeast of Springfield, and at mile 0.1.	.75	.11	+.11	-	23.0	530	8.2	6.0
30.8	03435770 Sulphur Fork Red River	Lat 36°30'47", long 86°51'44", Robertson County, on left bank 150 ft downstream from new bridge on State Highway 49, 1.3 mi northeast of Springfield, and at mile 30.8.	65.6	12.9	-	+.83	-	-	-	-
30.6	03435772 Wartrace Creek	Lat 36°27'52", long 86°49'52", Robertson County, at bridge on county road, just east of Greenbrier Pike, 0.8 miles east of Courtland, 2.9 miles northwest of Greenbrier, and at mile 4.4.	1.65	0	-	-	29.0	290	8.5	7.6
30.6	03435775 Wartrace Creek	Lat 36°28'54", long 86°51'00", Robertson County, at bridge on Old Greenbrier Pike, 0.9 miles east of Courtland, 2.9 miles northwest of Greenbrier, and at mile 4.4.	4.08	.49	+.49	-	25.0	320	8.4	8.1
30.6	03435780 Wartrace Creek	Lat 36°29'44", long 86°51'35", Robertson County, beside county road 2.3 miles southeast of Springfield, and at mile 1.7.	5.61	1.06	+.57	-	-	-	-	-
30.6	03435785 Wartrace Creek	Lat 36°30'26", long 86°52'00", Robertson County below Wartrace Lake Dam, 1.4 miles east of Springfield, and at mile 0.6.	6.92	1.07	+.01	-	35.5	375	9.2	8.0
30.6	03435787 Wartrace Creek	Lat 36°30'46", long 86°52'00", Robertson County, 200 ft above mouth, 1.1 miles east of Springfield, and at mile 0.0.	7.43	1.66	+.59	-	25.5	440	7.8	5.5
29.9	03435788 Sulphur Fork Red River Tributary No. 2	Lat 36°31'07", long 86°52'09", Robertson County, at end of private road, 1.1 miles northeast os Springfield.	.69	.05	-	-	30.0	375	8.1	4.5
29.4	03435789 Black Branch	Lat 36°31'05", long 86°52'57", Robertson County, at culvert on road to waterworks, and at mile 0.0.	1.02	.27	-	-	22.5	700	7.9	4.9

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
29.2	03435791 Sulphur Fork Red River Tributary No. 3	Lat 36°32'06", long 86°52'19", Robertson County, at county road bridge, 1.9 miles northeast of Youngville.	2.22	0	-	-	23.0	540	8.1	7.3
29.2	03435793 Sulphur Fork Red River Tributary No. 3	Lat 36°32'04", long 86°52'18", Robertson County, 150 ft downstream from county road bridge, 100 ft downstream from spring Number 11, 1.9 miles northeast of Springfield and 2.0 miles west of Beards Chapel.	3.08	.19	+.19	-	18.5	440	7.4	8.0
29.2	03435796 Sulphur Fork Red River Tributary No. 3	Lat 36°31'20", long 86°53'03", Robertson County, culvert under side road off U. S. Highway 4., 0.9 miles north of Springfield, 1.5 miles south of Mount Denson, and at mile 0.2.	4.10	.18	-.01	-	24.0	1000	8.2	7.2
29.1	03435800 Sulphur Fork Red River	Lat 36°31'15", long 86°53'11", Robertson County, at Old Hwy. 41 bridge 0.85 miles northwest of courthouse in Springfield, and at mile 29.1.	79.9	13.2	-	-1.86	-	-	-	-
27.1	03435805 Sulphur Fork Red River Tributary No. 4	Lat 36°31'13", long 86°54'36", Robertson County, at first bridge above mouth, 2.0 miles east of Kinneys and 1.6 miles northwest of Springfield, and at mile 0.1.	1.54	0	-	-	-	-	-	-
26.7	03435808 Sulphur Fork Red River Tributary No. 5	Lat 36°31'01", long 86°54'45", Robertson County, 200 ft above mouth, 1.6 miles west of Springfield, and at mile 0.0.	.43	0	-	-	-	-	-	-
26.7	03435810 Sulphur Fork Red River	Lat 36°30'59", long 86°54'46", Robertson County, at county road bridge 1.3 miles northwest of Springfield, and at mile 26.7.	84.5	14.3	-	+1.1	-	-	-	-
23.4	03435820 Sulphur Fork Red River	Lat 36°30'20", long 86°56'38", Robertson County, 250 ft above Carr Creek, 3.5 miles west of Springfield.	87.2	11.1	-	-3.2	25.5	480	7.8	3.8

Sulphur Fork Red River seepage investigation--Headwaters to Carr Creek--Continued

Sulphur Fork Red River mile	Stream	Location	Drainage Area (mi^2)	Meas. disch. (ft^3/s)	Tributary gain or loss	Sulphur Fork Red River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)	pH (units)	Dissolved Oxygen (mg/l)
23.3	03435898 Browns Fork	Lat 36°28'42", long 86°56'06", Robertson County, at county road bridge 100 ft southeast of State Highway 49, 3.5 miles southwest of Springfield, and at mile 0.5.	8.12	1.07	-	-	24.5	370	8.3	8.2
23.3	03435900 Carr Creek	Lat 36°28'54", long 86°55'45", Robertson County, at bridge on State Highway 49, 300 ft downstream from Browns Fork, and 3.1 miles southwest of courthouse at Springfield.	32.0	7.43	-	-	26.5	330	8.2	7.1
23.3	03435910 Carr Creek	Lat 36°30'12", long 86°56'28", Robertson County, 2.8 miles west of Springfield, and at mile 0.2.	36.8	9.75	+2.32	-	24.5	260	8.0	6.8
		Overall net gain or loss				+4.10				

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN

03407790 - NEW RIVER AT FORK MOUNTAIN, TENN (LAT 36 07 28 LONG 084 25 32)

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
OCT									
08...	I200	.73	230	8.0	I4.0	2	7.8	88	36
NOV									
03...	I130	5.0	I75	7.4	8.5	I	I0.8	53	I9
DEC									
03...	II45	3.8	125	--	I.0	2	--	5I	I9

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT									
08...	22	8.0	63	0	52	I.0	60	3.I	I48
NOV									
03...	I3	5.0	42	0	34	2.7	32	2.6	93
DEC									
03...	I3	4.4	38	0	3I	--	34	2.5	82

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT									
08...	.20	.29	3I0	50	30	2	5	.01	86
NOV									
03...	.I3	I.26	II0	I0	20	0	I3	.I8	82
DEC									
03...	.II	.85	30	30	7	0	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

03407850 - NEW RIVER AT STAINVILLE, TENN (LAT 36 12 34 LONG 084 19 18)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
08...	1030	23	470	7.9	13.5	10	7.4	210	140
NOV									
03...	1015	109	330	6.9	6.5	8	10.7	120	86
DEC									
03...	1030	78	240	--	.5	4	--	120	82

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT									
08...	53	19	81	0	66	1.6	200	1.8	357
NOV									
03...	31	11	45	0	37	9.1	100	1.3	150
DEC									
03...	30	10	41	0	34	--	100	1.2	181

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT									
08...	.49	22.6	1300	10	260	9	25	1.6	100
NOV									
03...	.20	44.1	1100	80	260	8	13	3.8	95
DEC									
03...	.25	38.3	480	80	--	3	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

03407879 - SMOKY CREEK AT SMOKY JUNCTION, TENN (LAT 36 16 38 LONG 084 22 27)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
08...	0900	12	245	7.6	13.5	45	7.4	110	76
NOV									
03...	0845	41	170	6.6	6.5	4	11.5	55	34
DEC									
03...	0915	29	110	--	.5	4	--	53	37

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT									
08...	26	12	47	0	39	1.9	85	.8	161
NOV									
03...	12	6.1	26	0	21	10	41	1.1	81
DEC									
03...	12	5.7	20	0	16	--	41	.7	79

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT									
08...	.22	5.26	3800	0	130	8	72	2.4	99
NOV									
03...	.11	9.16	320	90	80	2	3	.34	100
DEC									
03...	.11	6.34	200	80	50	0	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

03407908 - NEW RIVER AT CORDELL, TENN (LAT 36 20 10 LONG 084 27 06)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
07...	1530	83	340	7.6	17.0	15	8.1	170	130
NOV									
02...	1545	325	--	6.9	8.5	6	10.2	89	65
DEC									
02...	1515	189	175	6.8	1.5	5	--	85	61

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)
OCT									
07...	43	16	52	0	43	2.1	150	1.2	261
NOV									
02...	22	8.3	30	0	25	6.0	67	1.1	125
DEC									
02...	21	8.0	30	0	25	7.6	71	1.1	131

DATE	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED SOLIDS (TONS PER DAY)	TOTAL IRON (FE) (UG/L)	DISSOLVED IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	TOTAL NICKEL (NI) (UG/L)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT									
07...	.36	58.5	1500	0	240	8	31	6.9	96
NOV									
02...	.17	110	620	50	210	5	4	3.5	88
DEC									
02...	.18	66.9	500	20	190	2	--	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435112 - PARK SPRING NO. 2 NR CROSS PLAINS, TN (LAT 36 30 24 LONG 086 41 38)						
OCT , 1976						
13...	1000	.06	360	7.2	14.5	7.3
JUL , 1977						
21...	0930	.02	600	7.2	14.5	7.0
22...	0930	.00	600	7.2	14.5	7.0
AUG						
31...	1015	--	290	7.2	14.5	7.4
03435113 - PARK SPRING NO. 1 NR CROSS PLAINS, TN (LAT 36 30 25 LONG 086 41 36)						
OCT , 1976						
13...	1000	.00	320	7.0	14.5	7.7
03435114 - DORRIS SPRING NR CROSS PLAINS, TN (LAT 36 30 44 LONG 086 42 49)						
OCT , 1976						
13...	0945	.03	500	7.9	15.5	6.4
JUL , 1977						
21...	0915	.05	675	8.1	16.0	7.6
22...	0915	.00	675	8.1	16.0	7.6
AUG						
31...	1000	--	440	8.1	17.5	6.7
03435570 - SULPHUR FORK RED RIVER NEAR OAKDALE, TENN (LAT 36 26 49 LONG 086 44 13)						
OCT , 1976						
13...	1015	1.2	300	8.3	14.0	10.2
AUG , 1977						
30...	0908	--	360	8.2	22.0	8.5
03435590 - MILL BRANCH NEAR OAKDALE, TENN (LAT 36 26 50 LONG 086 41 27)						
OCT , 1976						
13...	1200	.11	280	8.0	16.0	8.5
AUG , 1977						
30...	0748	--	270	7.6	21.5	7.9
03435600 - MILL BRANCH NEAR WHITE HOUSE, TENN (LAT 36 26 52 LONG 086 42 53)						
OCT , 1976						
13...	1045	.45	285	8.1	15.5	9.8
AUG , 1977						
30...	0854	--	320	8.3	21.0	8.6
03435605 - STRICKLAND SPRING NR WHITE HOUSE, TN (LAT 36 27 56 LONG 086 41 37)						
OCT , 1976						
13...	1130	.02	410	6.9	15.0	7.5
AUG , 1977						
30...	0812	--	440	6.6	165	8.1
03435606 - MOSS BRANCH NEAR OAKDALE, TENN (LAT 36 27 37 LONG 086 42 56)						
OCT , 1976						
13...	1115	.15	450	8.3	14.0	9.1
AUG , 1977						
30...	0840	--	490	7.9	21.0	7.7

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435610 - SULPHUR FORK RED RIVER NEAR BAGGETTSVILLE, TENN (LAT 36 27 24 LONG 086 44 44)						
OCT , 1976						
13...	0915	2.7	315	8.0	12.5	8.1
AUG , 1977						
30...	1030	--	375	7.0	22.5	8.4
03435612 - MADDOX SPRING NR BAGGETTSVILLE, TN (LAT 36 27 14 LONG 086 44 49)						
OCT , 1976						
13...	0930	.01	245	7.8	13.5	8.5
AUG , 1977						
30...	0940	--	260	7.4	17.5	8.5
03435614 - PEYTON BRANCH NEAR RIDGETOP, TENN (LAT 36 26 40 LONG 086 45 09)						
OCT , 1976						
12...	1415	.20	250	8.8	21.0	9.6
AUG , 1977						
30...	1038	--	290	8.4	24.5	8.1
03435616 - PEYTON BRANCH TRIBUTARY NEAR RIDGETOP, TENN (LAT 36 26 39 LONG 086 45 07)						
OCT , 1976						
12...	1430	.02	250	8.2	16.0	9.1
AUG , 1977						
30...	1050	--	315	7.5	23.0	8.1
03435618 - PEYTON BRANCH NEAR BAGGETTSVILLE, TENN (LAT 36 27 09 LONG 086 44 58)						
OCT , 1976						
13...	1000	.22	285	8.1	13.0	8.2
AUG , 1977						
30...	0924	--	355	8.3	22.0	6.2
03435619 - BAGGETTSVILLE SPRING NR BAGGETTSVILLE, TN (LAT 36 28 35 LONG 086 43 32)						
OCT , 1976						
13...	0845	.06	310	8.0	14.5	8.6
AUG , 1977						
30...	0829	--	320	6.7	14.5	8.5
03435620 - SULPHUR FORK RED RIVER NEAR RIDGETOP, TENN (LAT 36 28 00 LONG 086 46 12)						
OCT , 1976						
12...	1400	3.5	295	8.3	14.0	9.5
AUG , 1977						
30...	1112	--	355	7.1	23.0	7.6
03435623 - POLE BRIDGE BRANCH TR NO 3 NEAR RIDGETOP, TENN (LAT 36 24 44 LONG 086 45 37)						
OCT , 1976						
12...	1545	E.10	270	8.0	14.0	6.2

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435625 - POLE BRIDGE BRANCH NEAR RIDGETOP, TENN (LAT 36 24 50 LONG 086 46 02)						
OCT , 1976						
12...	1545	.17	200	7.7	21.0	5.5
AUG , 1977						
30...	1459	--	190	--	29.5	6.7
03435627 - POLE BRIDGE BRANCH NEAR GREENBRIER, TENN (LAT 36 25 18 LONG 086 46 46)						
OCT , 1976						
12...	1530	.43	260	8.5	17.5	9.1
AUG , 1977						
30...	1443	--	360	--	25.5	7.9
03435629 - POLE BRIDGE BRANCH TR NO 2 AT GREENBRIER, TENN (LAT 36 26 08 LONG 086 47 12)						
AUG , 1977						
30...	1423	--	440	--	24.5	7.0
03435631 - LONG BRANCH AT GREENBRIER, TENN (LAT 36 26 08 LONG 086 46 50)						
OCT , 1976						
12...	1445	.38	275	8.2	19.5	8.2
AUG , 1977						
30...	1406	--	375	--	32.5	7.1
03435634 - LONG BRANCH NEAR GREENBRIER, TENN (LAT 36 27 59 LONG 086 46 24)						
OCT , 1976						
12...	1400	1.2	280	8.1	13.5	8.9
AUG , 1977						
30...	1102	--	350	6.9	23.0	6.0
03435635 - SAVAGE BRANCH NEAR GREENBRIER, TENN (LAT 36 28 38 LONG 086 46 04)						
OCT , 1976						
12...	1345	.16	375	8.4	14.0	8.2
AUG , 1977						
30...	1120	--	450	7.4	22.0	8.5
03435644 - SANTEE CREEK NEAR HUBERTVILLE, TENN (LAT 36 30 10 LONG 086 45 46)						
OCT , 1976						
13...	0845	.24	480	7.8	13.0	7.3
JUL , 1977						
22...	0820	.37	560	8.0	23.0	6.4
AUG						
31...	0920	--	350	8.0	23.5	6.0
03435647 - SANTEE CREEK TRIBUTARY NEAR HUBERTVILLE, TENN (LAT 36 30 05 LONG 086 45 48)						
OCT , 1976						
13...	0900	.13	500	7.7	13.0	7.5
JUL , 1977						
21...	0835	.08	650	7.9	23.0	6.5
AUG						
31...	0930	--	450	7.9	23.5	5.6

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435650 - SANTEE CREEK NEAR SPRINGFIELD, TENN (LAT 36 29 51 LONG 086 46 41)						
OCT , 1976						
12...	1330	.57	365	8.5	14.5	8.6
AUG , 1977						
30...	1134	--	450	7.2	23.0	7.3
03435709 - BEAVER DAM CREEK AT OWENS CHAPEL, TENN (LAT 36 31 28 LONG 086 45 47)						
OCT , 1976						
13...	0830	.60	280	7.4	13.5	7.4
JUL , 1977						
22...	0810	.04	440	7.7	26.0	4.5
AUG						
31...	0910	--	260	7.7	24.5	4.9
03435713 - BEAVER DAM CREEK NEAR HUBERTVILLE, TENN (LAT 36 31 47 LONG 086 47 25)						
OCT , 1976						
13...	0815	.18	320	7.4	13.5	5.7
JUL , 1977						
22...	0750	.31	480	7.7	24.5	5.9
AUG						
31...	0845	--	310	7.8	24.5	5.2
03435728 - OWENS SPRING NR HUBERTVILLE, TN (LAT 36 32 12 LONG 086 47 34)						
OCT , 1976						
13...	1345	.29	450	7.0	15.0	6.4
JUL , 1977						
21...	1420	.55	1200	7.2	18.0	6.1
AUG						
30...	1109	--	350	7.2	15.5	7.1
03435729 - BEAVER DAM CREEK NEAR LAKEVIEW, TENN (LAT 36 31 53 LONG 086 48 46)						
OCT , 1976						
12...	1200	.66	360	8.0	14.0	6.4
JUL , 1977						
21...	1310	.97	480	8.1	25.5	7.9
AUG						
30...	1140	--	370	8.0	24.0	7.4
03435731 - STATE FISH HATCHERY SPRING NR HUBERTVILLE, TN (LAT 36 32 33 LONG 086 48 58)						
OCT , 1976						
12...	1245	.35	380	7.8	17.0	8.5
JUL , 1977						
21...	1340	.43	560	7.5	18.0	14.6
AUG						
30...	1205	--	300	7.5	17.5	9.3

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435732 - PITT BROS. DISTILLERY SPRING NR HUBERTVILLE, TN (LAT 36 32 28 LONG 086 48 43)						
OCT , 1976						
12...	1230	.14	300	8.2	14.5	6.8
JUL , 1977						
21...	1330	.13	400	7.3	14.5	7.1
AUG						
30...	1155	--	360	7.4	15.5	6.5
03435734 - FISH HATCHERY BRANCH NEAR SPRINGFIELD, TENN (LAT 36 31 54 LONG 086 48 46)						
OCT , 1976						
12...	1215	.50	410	8.0	15.5	8.3
JUL , 1977						
21...	1300	.60	560	8.1	24.5	5.0
AUG						
30...	1130	--	380	8.1	23.0	5.4
03435739 - BEAVER DAM CREEK ABOVE SPRINGFIELD, TENN (LAT 36 31 40 LONG 086 49 29)						
OCT , 1976						
12...	1145	1.6	360	8.0	14.5	6.8
JUL , 1977						
21...	1245	1.6	540	8.2	25.0	8.0
AUG						
30...	1120	--	400	7.8	22.5	7.8
03435755 - HALLMAN SPRING NR SPRINGFIELD, TN (LAT 36 32 08 LONG 086 51 29)						
OCT , 1976						
12...	1130	.04	320	7.8	13.5	6.8
JUL , 1977						
21...	1115	.08	640	7.1	14.0	6.0
AUG						
30...	1025	--	320	7.1	14.5	5.2
03435761 - SULPHUR FORK RED RIVER TR NEAR SPRINGFIELD, TENN (LAT 36 31 28 LONG 086 51 00)						
OCT , 1976						
12...	1345	.11	400	8.0	15.5	5.4
JUL , 1977						
21...	1220	.11	530	8.2	23.0	6.0
AUG						
30...	1110	--	375	8.0	21.5	6.0
03435772 - WARTRACE CREEK NEAR GREENBRIER, TENN (LAT 36 27 52 LONG 086 49 52)						
JUL , 1977						
22...	1115	.00	290	8.5	29.0	7.6
03435773 - WARTRACE CREEK SPRING NR GREENBRIER, TN (LAT 36 27 53 LONG 086 49 52.01)						
JUL , 1977						
22...	1110	.27	320	8.3	17.0	6.4
AUG						
30...	1345	--	440	--	19.0	7.4
362824086501200 - WARTRACE CREEK NEAR COURTLAND, TN (LAT 36 28 24 LONG 086 50 12)						
JUL , 1977						
22...	1115	.28	290	8.5	29.0	7.6

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435774 - UNNAMED SPRING NEAR COURTLAND, TN (LAT 36 28 24 LONG 086 50 14)						
JUL , 1977						
22...	1110	.03	320	8.3	17.0	6.4
03435775 - WARTRACE CREEK AT COURTLAND, TENN (LAT 36 28 54 LONG 086 51 00)						
OCT , 1976						
12...	1200	.50	370	8.2	16.5	9.4
JUL , 1977						
22...	1055	.49	320	8.4	25.0	8.1
AUG						
30...	1332	--	420	--	27.0	7.7
03435780 - WARTRACE CREEK NEAR SPRINGFIELD, TENN (LAT 36 29 44 LONG 086 50 54)						
OCT , 1976						
12...	1300	.86	385	8.4	15.0	8.8
AUG , 1977						
30...	1304	--	490	--	24.0	8.1
03435785 - WARTRACE CREEK AT SPRINGFIELD, TENN (LAT 36 30 26 LONG 086 51 35)						
OCT , 1976						
12...	1430	.54	220	8.0	21.0	5.8
JUL , 1977						
21...	1450	1.1	375	9.2	33.5	8.0
AUG						
30...	1235	--	890	7.9	30.0	7.0
03435787 - WARTRACE CREEK AT MOUTH, AT SPRINGFIELD, TENN (LAT 36 30 46 LONG 086 52 00)						
OCT , 1976						
12...	1500	1.1	370	7.9	17.5	5.4
JUL , 1977						
22...	0725	1.7	440	7.8	25.5	5.5
AUG						
31...	0825	--	370	8.1	22.5	5.4
03435788 - SULPHUR FORK RED R TR NO 2 AT SPRINGFIELD, TENN (LAT 36 31 07 LONG 086 52 09)						
OCT , 1976						
12...	1400	.03	420	7.9	18.0	5.0
JUL , 1977						
21...	1515	.05	375	8.1	30.0	4.5
AUG						
30...	1250	--	440	8.0	23.5	5.8
03435789 - BLACK BRANCH AT SPRINGFIELD, TENN (LAT 36 31 05 LONG 086 52 57)						
OCT , 1976						
12...	1000	.27	680	7.6	10.5	7.4
JUL , 1977						
21...	0955	.27	700	7.9	22.5	4.9
AUG						
30...	0930	--	800	7.8	21.5	1.7

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435791 - SULPHUR FORK RED R TR NO 3 NEAR YOUNGVILLE, TENN (LAT 36 32 06 LONG 086 52 19)						
JUL , 1977						
21...	1030	.00	540	8.1	23.0	7.3
AUG						
30...	1000	--	370	7.9	21.0	6.1
03435792 - DRY BRIDGE SPRING NR SPRINGFIELD, TN (LAT 36 32 05 LONG 086 52 22)						
OCT , 1976						
12...	1100	.09	440	7.3	15.0	7.3
JUL , 1977						
21...	1040	.08	420	7.0	14.5	7.0
AUG						
30...	1010	--	340	6.9	15.5	6.6
03435793 - SULPHUR FORK RED R TR NO 3 NR BEARDS CHAPEL,TENN (LAT 36 32 04 LONG 086 52 18)						
OCT , 1976						
12...	1045	.05	500	7.6	14.5	7.0
JUL , 1977						
21...	1050	.19	440	7.4	18.5	8.0
AUG						
30...	1005	--	400	7.3	18.0	5.7
03435796 - SULPHUR FORK RED R TR NO 3 NEAR MT PLEASON, TENN (LAT 36 31 20 LONG 086 53 03)						
OCT , 1976						
12...	1015	1.4	1800	7.6	12.5	8.4
JUL , 1977						
21...	1005	.18	1000	8.2	24.0	7.2
AUG						
30...	0940	--	1000	8.0	22.0	6.0
03435820 - SULPHUR FK RED R AB CARR C NR SPRINGFIELD, TENN (LAT 36 30 20 LONG 086 56 38)						
OCT , 1976						
12...	0900	9.4	--	7.3	11.0	5.2
JUL , 1977						
21...	0850	11	480	7.8	25.5	3.8
AUG						
30...	0825	--	300	7.7	23.5	3.5
03435898 - BROWNS FORK NEAR SPRINGFIELD, TENN (LAT 36 28 42 LONG 086 56 06)						
JUL , 1977						
22...	1030	1.1	370	8.3	24.5	8.2
AUG						
30...	1220	--	400	7.0	24.5	8.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
03435900 - CARR CREEK NEAR SPRINGFIELD, TENN (LAT 36 28 54 LONG 086 55 45)						
OCT . 1976						
12...	1130	4.3	305	8.5	12.5	8.0
JUL . 1977						
22...	1035	7.4	330	8.2	26.5	7.1
AUG						
30...	1235	--	360	7.2	25.0	8.0
03435910 - CARR CREEK AT MOUTH, NEAR SPRINGFIELD, TENN (LAT 36 30 12 LONG 086 56 28)						
OCT . 1976						
12...	0845	6.3	--	7.7	10.0	8.2
JUL . 1977						
21...	0835	9.8	260	8.0	24.5	6.8
AUG						
30...	0820	--	350	7.7	23.0	5.7

TENNESSEE RIVER BASIN

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
03454790 - TRAIL FORK BIG CREEK AT DEL RIO, TN (LAT 35 54 27 LONG 083 01 26)				
NOV , 1976				
15...	1545	17	70	6.0
03454850 - LONG CREEK NEAR DEL RIO, TN (LAT 35 56 53 LONG 083 03 13)				
NOV , 1976				
15...	1615	2.4	200	7.0
03464650 - NOLICHUCKY RIVER NR ERWIN, TN (LAT 36 07 24 LONG 082 26 37)				
SEP . 1977				
01...	1315	519	70	26.5
03466099 - JOCKEY CREEK AT LIMESTONE, TN (LAT 36 13 31 LONG 082 38 06)				
NOV . 1976				
16...	1500	5.8	--	10.0
03466690 - LITTLE CHUCKY CREEK NR RADER, TN (LAT 36 10 18 LONG 082 56 33)				
JUL , 1977				
12...	1400	6.3	600	27.0
SEP				
02...	1230	3.1	--	26.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TENNESSEE RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
03466700 - LITTLE CHUCKY CREEK AT WARRENSBURG, TENN (LAT 36 07 28 LONG 083 05 37)				
NOV . 1976				
15...	1230	5.0	545	4.0
JUL . 1977				
12...	1145	8.2	530	25.0
03466870 - ROARING FORK NEAR GREENEVILLE, TN (LAT 36 13 18 LONG 082 52 05)				
NOV . 1976				
14...	1215	4.4	--	9.0
03466880 - ROARING FORK NEAR MOSHEIM, TN (LAT 36 14 38 LONG 082 53 37)				
NOV . 1976				
16...	1000	8.9	--	7.0
03467000 - LICK CREEK AT MOHAWK, TENN. (LAT 36 12 05 LONG 083 02 52.01)				
SEP . 1977				
02...	1400	35	--	26.0
03467490 - BENT CREEK NEAR SPRINGVALE, TN (LAT 36 11 14 LONG 083 09 53)				
NOV . 1976				
15...	1600	6.6	460	6.0
03468140 - MUDDY CREEK NEAR CHESTNUT HILL, TN (LAT 35 56 57 LONG 083 20 51)				
NOV . 1976				
16...	1115	.24	390	6.0
03468195 - RIMMER CREEK NR DANDRIDGE, TN (LAT 36 01 59 LONG 083 24 34)				
NOV . 1976				
15...	1200	1.1	380	12.0
03468196 - RIMMER CREEK AT HWY 70 NR DANDRIDGE, TN (LAT 36 01 39 LONG 083 23 52)				
NOV . 1976				
15...	1315	1.9	390	11.5
03469112 - WEBB CREEK NR PITTMAN CENTER, TN (LAT 35 45 39 LONG 083 21 20)				
NOV . 1976				
16...	1300	8.4	42	9.0
03470330 - TUCKAHOE CREEK AT PETERS MILL, TN (LAT 35 58 02 LONG 083 42 07)				
NOV . 1976				
15...	1500	7.7	--	7.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TENNESSEE RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
03470400 - HUFFAKER SPRING NEAR THORN GROVE, TENN (LAT 35 59 04 LONG 083 43 55)				
FEB . 1977				
22...	1330	3200	--	--
03476515 - BEIDLEMAN CREEK NEAR CAYWOOD FORD, TN (LAT 36 31 28 LONG 082 07 53)				
NOV . 1976				
17...	0900	21	--	7.0
03487548 - REEDY CREEK AT HWY 11 NR OREBANK, TN (LAT 36 34 00 LONG 082 27 05)				
NOV . 1976				
17...	1215	14	--	6.0
03487558 - CLARK BRANCH TRIB NR KINGSPORT, TN (LAT 36 34 21 LONG 082 29 44)				
NOV . 1976				
17...	1530	.23	--	9.5
03494750 - RICHLAND CREEK NR RUTLEDGE, TN (LAT 36 16 25 LONG 083 31 47)				
NOV . 1976				
17...	0945	5.0	320	6.0
03499053 - CULTON CREEK AT ALCOA, TN (LAT 35 46 41 LONG 083 59 46)				
NOV . 1976				
15...	1315	5.7	290	8.5
03499111 - STOCK CREEK NEAR ROCKFORD, TN (LAT 35 52 11 LONG 083 55 09)				
NOV . 1976				
15...	1130	7.4	330	6.5
03518470 - BALD RIVER NEAR TELLICO PLAINS, TN (LAT 35 19 20 LONG 084 10 40)				
NOV . 1976				
16...	1045	22	20	6.0
03518700 - CANE CREEK AT BELLTOWN MILL, TN (LAT 35 25 31 LONG 084 15 16)				
NOV . 1976				
16...	1200	6.5	75	8.5
03520170 - POND CREEK NEAR ADOLPHUS, TN (LAT 35 42 20 LONG 084 27 35)				
NOV . 1976				
16...	1330	10	25	9.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TENNESSEE RIVER BASIN--CONTINUED

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
03531700 - MULBERRY CREEK AT ALANTHUS HILL, TN (LAT 36 33 18 LONG 083 22 51)				
NOV , 1976				
17...	1215	10	290	8.0
03543300 - LITTLE SEWEE CREEK NEAR CENTER POINT, TENN (LAT 35 35 54 LONG 084 42 13)				
NOV , 1976				
16...	1530	9.6	280	8.5
03566000 - HIWASSEE RIVER AT CHARLESTON, TENN. (LAT 35 17 16 LONG 084 45 07)				
FEB , 1977				
17...	1430	3060	75	5.5
03566117 - EAST FORK NORTH MOUSE CREEK NEAR NIOTA, TENN (LAT 35 32 54 LONG 084 33 45)				
NOV , 1976				
16...	1430	.36	320	9.5
03604750 - BIRDSONG CREEK AT HOLLADAY, TENN (LAT 35 52 53 LONG 088 08 39)				
AUG , 1977				
25...	1400	3.3	52	26.0
OBION RIVER BASIN				
07024760 - SPRING CREEK NEAR GREENFIELD, TENN (LAT 36 11 24 LONG 088 45 53)				
AUG , 1977				
25...	0900	25	50	24.5
07025190 - MUD CREEK NEAR SHARON, TENN (LAT 36 15 59 LONG 088 50 05)				
AUG , 1977				
24...	1630	1.1	115	28.0
07026100 - REEDS CREEK NEAR TRIMBLE, TENN (LAT 36 10 48 LONG 089 15 15)				
AUG , 1977				
24...	1200	7.5	210	21.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

FORKED DEER RIVER BASIN

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
07027280 - JACKS CREEK AT JACKS CREEK, TENN (LAT 35 28 16 LONG 088 31 21)				
AUG. 1977				
25...	1100	9.6	50	22.5
07027495 - BOND CREEK AT BEMIS, TN (LAT 35 34 29 LONG 088 48 46)				
JUN. 1977				
01...	1100	.34	170	22.0
07027750 - NIXON CREEK NEAR NUT BUSH, TN (LAT 35 41 59 LONG 089 16 36)				
AUG. 1977				
24...	1420	.70	95	24.0
HATCHIE RIVER BASIN				
07030140 - CANE CREEK NEAR CHERRY, TENN (LAT 35 40 30 LONG 089 41 21)				
AUG. 1977				
24...	1120	5.7	290	28.5
07030160 - INDIAN CREEK AT GILT EDGE, TN (LAT 35 33 09 LONG 089 49 20)				
AUG. 1977				
24...	0945	.97	140	24.5
24...	1315	.80	400	27.0
WOLF RIVER BASIN				
07031685 - FLETCHER C TR AT CHARLES BRYAN RD, NR CORDOVA,TN (LAT 35 10 07 LONG 089 49 27.01)				
DEC. 1976				
13...	1505	.21	500	6.5
JAN. 1977				
05...	1105	.16	400	2.0
FEB				
01...	1405	.07	450	3.0
28...	1400	.38	300	11.5
MAY				
10...	1130	.01	380	22.0
07031690 - FLETCHER C TRIB AT WHITTEN RD, AT MEMPHIS, TN (LAT 35 09 38 LONG 089 50 13)				
SEP. 1977				
29...	1145	48	130	19.0
07031695 - HARRINGTON C TRIB AT HAWTHORNE RD AT BARTLETT TN (LAT 35 11 43 LONG 089 51 24)				
APR. 1977				
23...	1445	7.3	52	18.0
SEP				
27...	1230	.24	80	24.0
07031697 - HARRINGTON C TRIB AT STAGE RD, AT BARTLETT TN (LAT 35 12 20 LONG 089 53 03.01)				
APR. 1977				
23...	1350	7.3	52	18.0
SEP				
27...	1315	.24	80	24.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
CUMBERLAND RIVER BASIN									
03414500 - EAST FORK OBEY RIVER NEAR JAMESTOWN, TENN. (LAT 36 24 58 LONG 085 01 35.01)									
OCT . 1976					JUN . 1977				
19...	1145	19	420	11.0	07...	0900	25	270	19.5
NOV					AUG				
17...	1100	70	--	8.0	02...	0820	32	360	19.5
03416000 - WOLF RIVER NEAR BYRDSTOWN, TENN. (LAT 36 33 37 LONG 085 04 23.01)									
OCT . 1976					MAR . 1977				
19...	1420	20	325	11.5	02...	1100	161	160	5.5
NOV					JUN				
17...	1445	37	270	7.0	07...	1115	22	265	22.5
DEC					AUG				
21...	1330	102	215	4.0	02...	1100	39	310	23.0
03418070 - ROARING RIVER ABOVE GAINESBORO, TENN (LAT 36 21 04 LONG 085 32 45)									
DEC . 1976					AUG . 1977				
21...	1010	31	245	2.5	01...	1435	178	250	24.0
FEB . 1977									
28...	1420	47	185	9.0					
03421000 - COLLINS RIVER NEAR MCMINNVILLE, TENN. (LAT 35 42 32 LONG 085 43 46)									
OCT . 1976					JUN . 1977				
19...	1535	127	280	13.5	09...	1500	225	215	22.0
NOV					AUG				
18...	1235	231	205	9.0	03...	1010	152	230	24.0
03426800 - EAST FORK STONES RIVER AT WOODBURY, TENN. (LAT 35 49 41 LONG 086 04 36)									
OCT . 1976					JUL . 1977				
08...	1245	9.9	310	15.5	07...	1410	10	--	24.5
NOV					AUG				
19...	1906	10	240	11.5	03...	1245	7.6	280	23.0
MAY . 1977									
12...	1300	27	230	18.0					
03428200 - WEST FORK STONES RIVER AT MURFREESBORO, TENN (LAT 35 54 10 LONG 086 25 48)									
OCT . 1976					MAY . 1977				
07...	1505	22	475	18.0	13...	1610	486	375	22.0
NOV					JUN				
17...	1640	44	425	10.0	15...	1405	25	--	24.5
APR . 1977					AUG				
14...	1445	159	350	21.0	04...	0950	5.6	500	25.0
03430800 - COLLINS CREEK AT BELL ROAD, NEAR ANTIOCH, TENN (LAT 36 02 42 LONG 086 39 34)									
OCT . 1976					MAR . 1977				
05...	1110	.10	440	21.0	12...	1120	315	180	13.0
NOV					APR				
05...	1305	1.4	500	10.0	11...	1320	3.3	470	22.0
FEB . 1977					MAY				
01...	1335	1.3	560	2.0	03...	1315	2.7	400	20.0
24...	0910	51	280	8.5					
MAR									
03...	1240	5.7	370	9.0					
04...	1115	87	320	11.5					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

CUMBERLAND RIVER BASIN--CONTINUED

03431517 - CUMMINGS BRANCH AT LICKTON, TENN (LAT 36 18 25 LONG 086 48 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
10...	1035	.16	420	16.0
NOV				
04...	1050	.56	340	8.0
DEC				
09...	1145	.79	360	6.0
JAN . 1977				
31...	1405	.56	300	5.5
MAR				
08...	1250	6.0	250	12.5
APR				
08...	1220	5.6	220	14.0
MAY . 1977				
02...	1300	1.2	300	17.0
JUN				
01...	1150	.13	390	21.0
JUL				
06...	1125	.40	360	27.0
AUG				
12...	0945	.34	400	21.5
SEP				
08...	1135	.24	420	22.5

03431700 - RICHLAND C AT CHARLOTTE AVE., AT NASHVILLE, TENN (LAT 36 09 04 LONG 086 51 16)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
04...	1350	3.5	480	20.0
NOV				
04...	1400	14	550	12.5
DEC				
09...	1430	12	600	5.5
FEB . 1977				
02...	1505	8.8	540	5.0
MAR				
09...	1345	34	430	14.0
APR				
12...	1315	27	490	19.5
MAY . 1977				
05...	1350	6.9	500	19.5
JUN				
03...	1105	2.0	420	22.5
JUL				
07...	1325	1.0	780	30.0
AUG				
12...	1250	1.0	470	28.0
SEP				
08...	1445	1.7	500	27.0

03431800 - SYCAMORE CREEK NEAR ASHLAND CITY, TENN. (LAT 36 19 12 LONG 087 03 04.01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
08...	1450	36	270	14.5
NOV				
19...	0945	32	280	6.0
FEB . 1977				
02...	1130	37	250	.8
APR				
19...	1015	56	225	19.5
MAY . 1977				
27...	1240	29	265	22.5
JUN				
10...	1020	20	--	70.0
AUG				
18...	1100	33	280	23.0
30...	0900	15	300	24.5

03432350 - HARPETH RIVER AT FRANKLIN, TENN (LAT 35 55 14 LONG 086 51 56)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
08...	1400	31	380	14.5
NOV				
16...	1145	44	375	7.0
DEC				
27...	1540	106	370	4.5
JAN . 1977				
31...	1335	80	350	3.0
MAR				
01...	1200	646	320	8.0
MAR . 1977				
04...	1200	8520	120	9.5
MAY				
04...	0945	197	400	19.0
JUN				
28...	1240	42	320	25.5
AUG				
19...	1115	78	260	22.5

03433500 - HARPETH RIVER AT BELLEVUE, TENN., (LAT 36 03 16 LONG 086 55 42.01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
04...	1450	35	--	19.5
NOV				
15...	1610	156	355	6.0
JAN . 1977				
31...	1600	243	350	1.0
JUN . 1977				
09...	0935	30	330	20.0
AUG				
19...	1350	143	320	24.0

03434500 - HARPETH RIVER NEAR KINGSTON SPRINGS, TENN. (LAT 36 07 19 LONG 087 05 56)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
26...	1100	5420	220	13.5
NOV				
17...	0955	275	320	5.0
DEC				
27...	0920	317	335	2.0
FEB . 1977				
24...	1200	11500	165	8.5
MAR . 1977				
28...	0930	541	270	45.0
JUL				
27...	1150	144	270	25.5
28...	1110	128	265	24.5
AUG				
26...	0900	98	300	23.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
CUMBERLAND RIVER BASIN--CONTINUED									
03435770 - SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TENN (LAT 36 30 47 LONG 086 51 44)									
NOV , 1976					JUN , 1977				
15...	1445	19	325	4.5	08...	1300	13	--	17.0
FEB , 1977					JUL				
11...	1230	22	300	4.0	21...	1000	12	--	25.0
03436000 - SULPHUR FORK RED RIVER NEAR ADAMS, TENN (LAT 36 30 55 LONG 087 03 32.01)									
OCT , 1976					MAY , 1977				
08...	1215	46	420	14.0	26...	1510	56	340	23.0
NOV					JUN				
18...	1220	37	360	6.0	09...	1235	31	--	20.5
FEB , 1977					AUG				
01...	1205	60	320	.8	30...	1300	21	420	27.8
03436100 - RED RIVER AT PORT ROYAL, TENN (LAT 36 33 17 LONG 087 08 31)									
OCT , 1976					NOV , 1976				
08...	1030	331	365	15.0	18...	1430	193	360	7.0
03436700 - YELLOW CREEK NEAR SHILOH, TENN. (LAT 36 20 55 LONG 087 32 20.01)									
NOV , 1976					MAY , 1977				
17...	1420	39	280	8.0	27...	1610	54	240	22.5
FEB , 1977					AUG				
02...	1510	45	240	3.0	18...	1330	35	265	23.0
MAR					SEP				
19...	1440	112	230	20.0	01...	1110	30	280	24.5
TENNESSEE RIVER BASIN									
03455000 - FRENCH BROAD RIVER NEAR NEWPORT, TENN. (LAT 35 58 54 LONG 083 09 40)									
OCT , 1976					JUN , 1977				
21...	1300	1770	100	10.0	02...	0930	3300	75	21.5
DEC					JUL				
10...	1300	3450	42	6.5	27...	1210	1330	115	25.5
FEB , 1977									
09...	1300	1600	115	1.0					
03461200 - COSBY CREEK ABOVE COSBY TN (LAT 35 46 58 LONG 083 13 03)									
OCT , 1976					MAY , 1977				
21...	1100	18	17	9.0	12...	1500	14	16	12.0
NOV					JUN				
30...	1230	31	18	5.0	14...	1230	18	20	15.0
FEB , 1977					AUG				
08...	1230	16	17	.5	25...	1200	23	22	16.0
APR									
11...	1230	34	16	12.0					
03461500 - PIGEON RIVER AT NEWPORT, TENN. (LAT 35 57 38 LONG 083 10 28)									
OCT , 1976					JUL , 1977				
21...	1530	1690	360	13.0	27...	1410	182	280	27.0
JUN , 1977									
02...	1300	2130	250	20.5					
03465500 - NOLICHUCKY RIVER AT EMBREEVILLE, TENN. (LAT 36 10 35 LONG 082 27 27)									
OCT , 1976					JUN , 1977				
27...	1320	1620	59	8.0	01...	1445	2190	50	22.0
DEC					JUL				
13...	1200	2530	45	6.5	19...	1530	590	70	30.0
FEB , 1977					SEP				
01...	1230	754	60	1.0	01...	1500	658	74	27.0
MAR									
10...	1100	1890	49	9.0					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TENNESSEE RIVER BASIN--CONTINUED

03470000 - LITTLE PIGEON RIVER AT SEVIERVILLE, TENN. (LAT 35 52 42 LONG 083 34 40)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976					MAY , 1977				
18...	1550	193	155	16.0	18...	0940	196	128	22.0
DEC					JUN				
16...	1530	1520	80	8.5	29...	0930	646	85	24.0
FEB , 1977					AUG				
08...	1055	141	115	.5	19...	1130	942	190.	21.5
MAR									
02...	1415	587	68	8.5					

03484000 - WATAUGA RIVER BELOW WILBUR DAM, TENN. (LAT 36 20 39 LONG 082 07 46)

DEC , 1976					SEP , 1977				
14...	1000	1860	76	7.0	07...	1230	43	80	14.0
JUL , 1977									
20...	1015	52	72	14.0					

03485500 - DOE RIVER AT ELIZABETHTON, TENN. (LAT 36 20 40 LONG 082 12 37)

DEC , 1976					MAY , 1977				
14...	1145	541	53	4.0	31...	1630	146	80	23.5
FEB , 1977					SEP				
02...	1015	100	44	1.0	07...	1600	113	100	22.0
MAR									
09...	1545	380	52	9.5					

03486000 - WATAUGA RIVER AT ELIZABETHTON, TENNESSEE (LAT 36 21 21 LONG 082 13 26)

MAR , 1977					JUL , 1977				
09...	1430	603	59	10.0	20...	0730	260	85	16.0

03487550 - REEDY CREEK AT OREBANK, TENN. (LAT 36 33 42 LONG 082 27 36)

OCT , 1976					APR , 1977				
28...	1130	38	415	6.0	04...	1645	953	--	13.0
NOV					MAY				
17...	1330	14	--	6.5	31...	1300	16	360	22.5
DEC					JUL				
15...	1115	54	360	7.0	21...	0800	8.7	375	29.0
FEB , 1977					SEP				
02...	1445	24	380	1.0	07...	1000	6.4	410	23.0
MAR									
09...	1230	35	350	9.0					

03491000 - BIG CREEK NEAR ROGERSVILLE, TENN. (LAT 36 25 34 LONG 082 57 07)

NOV , 1976					MAY , 1977				
02...	1130	26	350	--	18...	1145	13	310	--
DEC					JUL				
15...	1500	78	300	--	13...	1130	7.4	380	--
FEB , 1977					SEP				
03...	1245	20	335	--	06...	1200	4.9	380	--
MAR									
11...	1345	39	280	--					

03491300 - BEECH CREEK AT KEPLER, TENN. (LAT 36 24 06 LONG 082 53 09)

NOV , 1976					MAY , 1977				
02...	1320	14	280	10.5	18...	1400	9.3	265	22.0
DEC					JUL				
15...	1400	66	200	6.0	13...	1315	14	300	26.0
FEB , 1977					SEP				
03...	1200	12	270	1.0	06...	1315	2.7	290	26.0
MAR									
11...	1500	29	240	14.0					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
TENNESSEE RIVER BASIN--CONTINUED				
03497300 - LITTLE RIVER ABOVE TOWNSEND, TENN. (LAT 35 39 52 LONG 083 42 41)				
OCT , 1976				
18...	1200	97	20	--
FEB , 1977				
08...	1530	135	18	--
MAY				
18...	1500	100	21	--
JUN , 1977				
29...	1500	443	19	--
AUG				
18...	1600	1170	20	--
03498500 - LITTLE RIVER NEAR MARYVILLE, TENN (LAT 35 47 10 LONG 083 53 04)				
OCT , 1976				
19...	1000	158	165	10.0
FEB , 1977				
07...	1530	172	130	3.0
MAR				
22...	1020	528	170	9.5
MAY , 1977				
17...	1040	202	125	21.5
JUL				
28...	0950	137	105	24.5
03518500 - TELLICO RIVER AT TELLICO PLAINS, TENN. (LAT 35 21 42 LONG 084 16 44)				
OCT , 1976				
19...	1325	78	28	--
DEC				
21...	1445	678	--	--
FEB , 1977				
07...	1150	96	22	--
MAR , 1977				
22...	1415	355	18	--
MAY				
17...	1400	141	20	--
JUL				
28...	1315	70	29	--
03535000 - BULLRUN CREEK NEAR HALLS CROSSROADS, TENN (LAT 36 06 52 LONG 083 59 16)				
OCT , 1976				
22...	1200	15	330	12.0
DEC				
20...	1130	62	330	7.5
FEB , 1977				
04...	1200	27	360	1.0
MAR				
01...	1000	89	280	4.5
APR , 1977				
06...	1645	709	220	12.0
JUN				
21...	1100	29	300	24.0
JUL				
29...	1000	12	290	24.0
03538225 - POPLAR CREEK NEAR OAK RIDGE, TENN. (LAT 35 59 55 LONG 084 20 23.01)				
OCT , 1976				
22...	1110	18	315	8.5
DEC				
22...	1330	112	205	1.5
FEB , 1977				
09...	1400	47	250	3.5
MAY , 1977				
18...	1330	29	300	19.5
JUL				
18...	0930	14	330	25.0
03538250 - EAST FORK POPLAR CREEK NEAR OAK RIDGE, TENN. (LAT 35 57 58 LONG 084 21 30)				
OCT , 1976				
22...	1330	16	390	11.0
DEC				
22...	1115	45	295	4.5
FEB , 1977				
09...	1100	21	410	3.5
MAR				
14...	1215	122	220	12.0
MAY , 1977				
18...	1130	11	380	18.5
JUL				
18...	1300	20	340	25.5
SEP				
09...	1045	37	--	25.0
03539800 - OBED RIVER NEAR LANCING, TENN. (LAT 36 04 53 LONG 084 40 15)				
OCT , 1976				
01...	1215	67	45	20.0
FEB , 1977				
24...	1330	2150	40	6.0
MAY , 1977				
19...	1400	141	48	21.5
AUG				
10...	1430	63	80	29.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
TENNESSEE RIVER BASIN--CONTINUED									
03543500 - SEQUEE CREEK NEAR DECATUR, TENN. (LAT 35 34 53 LONG 084 44 53)									
OCT, 1976					APR, 1977				
04...	1015	22	270	17.5	19...	1330	122	--	16.0
NOV					JUN				
01...	1030	93	209	12.3	02...	1600	38	270	20.0
DEC					AUG				
02...	1100	86	240	5.5	02...	0930	29	295	23.0
FEB, 1977									
11...	1430	58	240	6.0					
03556500 - HIWASSEE RIVER NEAR MCFARLAND, TENN (LAT 35 10 48 LONG 084 26 36)									
OCT, 1976					AUG, 1977				
04...	1700	2920	32	20.0	04...	1530	3110	85	19.0
03563000 - OCOEE RIVER AT EMF, TENN. (LAT 35 05 48 LONG 084 32 07)									
NOV, 1976					MAR, 1977				
01...	1400	1430	120	14.2	08...	1300	1310	165	12.0
JAN, 1977					JUN				
04...	1420	1290	105	5.0	01...	1200	1460	60	19.0
FEB									
10...	1100	1280	100	3.0					
03565300 - SOUTH CHESTUEE CREEK NEAR BENTON, TENN (LAT 35 10 02 LONG 084 42 59)									
OCT, 1976					JUN, 1977				
05...	1000	4.0	300	16.0	01...	1615	12	300	20.5
DEC					AUG				
03...	1430	12	220	5.0	05...	0815	4.2	330	23.0
MAR, 1977									
30...	1230	998	140	16.0					
31...	1130	217	190	15.0					
03565500 - OOSTANAULA CREEK NEAR SANFORD, TENN. (LAT 35 19 39 LONG 084 42 19)									
OCT, 1976					MAR, 1977				
04...	1430	27	350	18.5	30...	1400	466	200	17.0
DEC					JUN				
02...	1245	62	270	7.0	02...	0945	42	310	18.0
FEB, 1977					AUG				
10...	1345	48	280	7.0	02...	1645	30	320	24.0
03566000 - HIWASSEE RIVER AT CHARLESTON, TENN. (LAT 35 17 16 LONG 084 45 07)									
FEB, 1977									
17...	1430	3060	75	5.5					
03566420 - WOLFTEVER CREEK NEAR OOLTEWAH, TENN (LAT 35 03 43 LONG 085 03 59)									
OCT, 1976					APR, 1977				
06...	1110	47	440	17.5	05...	1835	209	100	13.0
NOV					MAY				
09...	1000	4.8	420	7.0	03...	1140	46	200	17.0
DEC					JUN				
07...	1220	103	245	8.0	07...	1100	6.4	300	20.0
FEB, 1977					JUL				
01...	1115	10	300	3.0	07...	1230	2.9	350	27.0
MAR					AUG				
01...	1035	59	160	7.5	08...	2005	6.2	440	25.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

TENNESSEE RIVER BASIN--CONTINUED

03567500 - SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TENN. (LAT 35 00 50 LONG 085 12 27)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
06...	1015	147	--	18.0
NOV				
09...	0855	1.5	295	6.5
DEC				
07...	1100	1300	185	6.5
FEB , 1977				
01...	0830	307	250	2.5
MAR , 1977				
01...	0915	1700	160	9.5
MAY				
03...	1020	490	210	18.0
JUN				
07...	0920	198	215	21.0
AUG				
16...	0925	145	225	26.0

03571000 - SEQUATCHIE RIVER NEAR WHITWELL, TENN. (LAT 35 12 22 LONG 085 29 48)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
05...	1410	69	250	18.0
NOV				
08...	1510	173	220	8.0
DEC				
06...	1250	257	205	7.0
JAN , 1977				
31...	1535	589	145	4.5
FEB				
28...	1550	1420	110	9.5
MAY				
02...	1610	505	270	17.0
JUN				
06...	1645	131	200	22.0
JUL				
08...	1005	127	210	26.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
05...	1410	69	250	18.0
NOV				
08...	1510	173	220	8.0
DEC				
06...	1250	257	205	7.0
JAN , 1977				
31...	1535	589	145	4.5
FEB				
28...	1550	1420	110	9.5
MAY				
02...	1610	505	270	17.0
JUN				
06...	1645	131	200	22.0
JUL				
08...	1005	127	210	26.0

03578000 - ELK RIVER NEAR PELHAM, TENN. (LAT 35 17 48 LONG 085 52 12)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
06...	1430	11	260	19.0
NOV				
10...	1150	30	165	11.0
DEC				
08...	1205	226	140	8.0
JAN , 1977				
05...	1400	173	165	7.0
FEB				
02...	0940	75	250	4.5
MAR , 1977				
02...	1025	226	110	9.0
MAY				
04...	1205	235	125	14.0
JUN				
07...	1515	15	135	20.0
JUL				
05...	1330	17	215	22.0
AUG				
17...	1115	12	180	26.0

03584500 - ELK RIVER NEAR PROSPECT, TENN. (LAT 35 01 39 LONG 086 56 52)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
05...	1100	751	275	21.0
MAR , 1977				
02...	1145	3640	260	9.0
MAY , 1977				
03...	1140	1370	320	19.5
JUN				
07...	1150	365	180	24.0

03588000 - SHOAL CREEK AT LAWRENCEBURG, TENN. (LAT 35 14 40 LONG 087 21 02)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
14...	1530	27	165	15.5
NOV				
03...	0955	49	140	11.0
FEB , 1977				
01...	1520	45	55	6.5
MAR , 1977				
02...	1410	83	110	14.5
MAY				
11...	1540	44	105	18.0
JUL				
13...	1735	33	140	24.0

03588400 - CHISHOLM CREEK AT WESTPOINT, TENN. (LAT 35 08 04 LONG 087 31 45)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT , 1976				
15...	1215	24	90	31.0
NOV				
02...	1510	74	70	11.0
DEC				
21...	1035	36	75	4.0
FEB , 1977				
02...	1045	39	40	1.0
MAR , 1977				
02...	1050	111	58	16.5
MAY				
11...	0955	37	78	15.0
JUL				
13...	1555	18	75	24.0
AUG				
18...	0950	21	55	23.0

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)

TENNESSEE RIVER BASIN--CONTINUED

03596000 - DUCK RIVER BELOW MANCHESTER, TENN (LAT 35 28 15 LONG 086 07 18)

OCT , 1976					MAY , 1977				
08...	1025	48	190	15.0	04...	0930	343	80	17.0
NOV					JUN				
10...	0855	62	130	8.0	08...	0810	31	--	19.0
DEC					JUL				
08...	0950	158	120	5.0	05...	1015	32	155	26.0
FEB , 1977					AUG				
02...	1350	75	110	3.0	17...	0845	53	170	26.0
MAR									
02...	0730	216	85	7.0					

03598000 - DUCK RIVER NEAR SHELBYVILLE, TENN. (LAT 35 28 49 LONG 086 29 57)

OCT , 1976					JUN , 1977				
07...	1235	280	195	17.5	08...	0815	197	170	22.0
NOV					JUL				
10...	1210	659	170	11.0	12...	1015	183	180	26.0
MAR , 1977					AUG				
03...	0720	857	190	13.0	18...	0855	274	170	23.5
MAY					SEP				
03...	1530	441	305	21.0	01...	0930	173	145	24.5

03599500 - DUCK RIVER AT COLUMBIA, TENN. (LAT 35 37 05 LONG 087 01 56)

OCT , 1976					AUG , 1977				
04...	1500	277	220	22.0	17...	1135	323	195	28.5
DEC									
06...	1300	1260	--	6.0					

03600500 - BIG BIGBY CREEK AT SANDY HOOK, TENN (LAT 35 29 19 LONG 087 13 59)

OCT , 1976					FEB , 1977				
14...	1350	7.4	--	18.0	25...	1400	70	120	11.5
NOV					APR				
17...	1520	7.8	185	11.5	07...	1330	48	118	16.5
19...	1015	7.1	195	11.0	MAY				
FEB , 1977					12...	1005	10	160	16.5
02...	1555	12	175	6.0					
18...	1040	10	115	6.5					

03602500 - PINEY RIVER AT VERNON, TENN. (LAT 35 52 16 LONG 087 30 05)

OCT , 1976					MAY , 1977				
04...	1730	97	275	17.0	11...	1440	245	200	15.0
NOV					JUN				
17...	1132	112	245	8.0	09...	1230	114	235	19.0
JAN , 1977					JUL				
31...	1140	125	235	2.0	14...	1330	97	230	24.0
FEB					AUG				
29...	1430	814	155	10.5	19...	1050	91	240	20.5

03604500 - BUFFALO RIVER NEAR LOBELVILLE, TENN. (LAT 35 48 46 LONG 087 47 51)

OCT , 1976					APR , 1977				
15...	1230	435	120	16.5	13...	0945	1210	100	17.0
DEC					JUL				
28...	1300	617	105	6.0	14...	1030	340	120	27.0
MAR , 1977					SEP				
01...	1445	2670	82	11.0	09...	1510	319	120	25.0

03605555 - TRACE CREEK ABOVE DENVER, TENN (LAT 36 03 08 LONG 087 54 27)

DEC , 1976					APR , 1977				
07...	1110	14	--	7.0	19...	1600	21	150	19.5
MAR , 1977					JUL				
10...	1245	51	180	11.0	19...	1145	11	210	25.5
12...	1208	2410	70	14.5					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)

TENNESSEE RIVER BASIN--CONTINUED

03606500 - BIG SANDY RIVER AT BRUCETON, TENN (LAT 36 02 19 LONG 088 13 42)

OCT , 1976					APR , 1977				
05...	1030	91	78	17.0	19...	1415	117	35	19.0
NOV					JUN				
11...	1205	134	36	85.0	01...	0945	95	25	20.5
FEB , 1977					JUL				
04...	1610	183	33	6.0	19...	1430	64	30	25.0

OBION RIVER BASIN

07024300 - BEAVER CREEK AT HUNTINGDON, TENN. (LAT 35 59 56 LONG 088 26 01.01)

OCT , 1976					MAY , 1977				
06...	1135	59	47	16.0	02...	1600	48	64	17.5
NOV					JUN				
16...	1030	44	80	7.0	06...	1410	30	45	20.0
JAN , 1977					JUL				
04...	1520	41	46	6.0	27...	1410	31	42	19.5
FEB					SEP				
10...	1500	45	51	7.0	13...	1450	27	42	20.0
MAR									
21...	1615	49	58	13.5					

07024500 - SOUTH FORK OBION RIVER NEAR GREENFIELD, TENN (LAT 36 07 05 LONG 088 48 39.01)

OCT , 1976					MAR , 1977				
05...	1400	150	54	19.0	22...	1400	309	61	14.5
NOV					JUN				
19...	1200	216	52	9.0	07...	1340	119	48	22.0
JAN , 1977					JUL				
05...	1435	200	53	4.0	28...	1300	160	53	18.0
FEB					SEP				
09...	1330	219	50	5.0	14...	1400	163	50	21.0

LOOSAHATCHIE RIVER BASIN

07030240 - LOOSAHATCHIE RIVER NEAR ARLINGTON, TENN. (LAT 35 18 37 LONG 089 38 23)

DEC , 1976					JUN , 1977				
13...	1000	110	59	9.0	09...	0930	85	44	19.0
FEB , 1977					30...	0950	91	46	22.0
02...	1000	89	50	5.5	JUL				
10...	1130	99	--	9.3	21...	1000	122	45	22.0
MAR					AUG				
17...	1030	152	60	14.0	17...	0930	112	49	23.5
APR					SEP				
26...	1115	115	60	15.0	07...	0955	80	43	21.0
MAY									
17...	1000	92	49	20.0					

07030295 - LOOSAHATCHIE R TR AT NEW ALLEN RD AT MEMPHIS TN (LAT 35 14 17 LONG 089 57 04.01)

FEB , 1977					JUN , 1977				
07...	1420	.08	280	3.0	27...	1005	.04	180	26.0
MAY					SEP				
05...	1540	.01	180	29.0	07...	1400	4.1	700	25.0
JUN									
06...	1050	.00	220	30.0					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
WOLF RIVER BASIN									
07031650 - WOLF RIVER AT GERMANTOWN, TN (LAT 35 06 59 LONG 089 48 05)									
OCT . 1976					MAR . 1977				
13...	1145	292	60	16.5	28...	1400	560	54	20.0
NOV					SEP				
22...	1140	392	50	8.2	07...	1300	250	44	27.0
FEB . 1977									
02...	1330	506	--	3.2					
07031680 - FLETCHER CREEK NEAR CORDOVA, TN (LAT 35 11 21 LONG 089 45 42)									
DEC . 1976					APR . 1977				
13...	1210	.09	285	4.0	02...	1630	82	42	16.0
JAN . 1977					06...	0945	.61	80	8.0
05...	1000	.07	115	1.0	26...	1350	.41	90	15.0
FEB					SEP				
28...	1315	.17	95	7.0	29...	1035	45	120	14.0
07031777 - LICK CREEK AT DICKINSON STREET, AT MEMPHIS, TENN (LAT 35 09 24 LONG 090 00 12)									
DEC . 1976					APR . 1977				
15...	1355	.84	150	12.0	28...	1140	.91	210	22.0
JAN . 1977					MAY				
07...	0900	2.1	150	7.0	17...	1440	.84	160	25.0
FEB					JUN				
03...	1540	1.5	200	10.0	09...	1505	1.3	190	27.0
MAR					JUL				
18...	1110	1.0	240	18.0	01...	1125	1.2	150	25.0
APR					20...	1030	2.3	140	26.0
07...	0815	1.4	190	17.0					
NONCONNAH CREEK BASIN									
07032200 - NONCONNAH CREEK NEAR GERMANTOWN, TENN. (LAT 35 02 59 LONG 089 49 08)									
OCT . 1976					MAY . 1977				
13...	1330	.04	160	24.7	10...	1540	.59	--	26.0
NOV					JUN				
08...	1415	.21	150	11.8	07...	0900	.13	150	23.0
22...	1410	.42	160	8.3	27...	1430	25	42	25.0
DEC					SEP				
15...	1415	2.0	160	6.2	07...	1515	.39	200	32.0
FEB . 1977					29...	1215	428	54	20.0
02...	1530	1.4	--	3.2					
MAR									
03...	1050	4.4	--	9.0					
07032222 - JOHNS CREEK TRIB AT HOLMES RD, NR MEMPHIS, TN (LAT 35 00 20 LONG 089 52 16.01)									
OCT . 1976					MAY . 1977				
18...	1100	.06	210	10.5	03...	1140	.66	200	19.7
NOV					18...	0950	.23	165	22.0
22...	1600	.10	340	6.8	SEP				
APR . 1977					08...	0955	.14	80	25.0
02...	1520	49	140	18.0					

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)

NONCONNAH CREEK BASIN--CONTINUED

07032241 - BLACK BAYOU AT SOUTHERN AVENUE, AT MEMPHIS, TENN (LAT 35 06 55 LONG 089 56 00)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
13...	1440	.20	570	20.3
NOV				
08...	1531	.31	520	10.5
23...	1210	.14	320	3.7
24...	1315	.08	190	15.0
DEC				
15...	1615	1.1	320	4.5
FEB . 1977				
04...	1105	1.9	--	4.0
08...	1355	.25	--	15.0
MAR				
02...	1245	2.2	150	11.0
APR				
02...	1315	1.2	200	18.5
MAY . 1977				
03...	1125	2.3	300	20.0
18...	1125	.43	400	26.0
24...	1730	4.8	800	24.0
JUN				
29...	0945	1.2	500	26.0
JUL				
25...	1130	.52	125	22.0
25...	1335	3.5	150	30.0
28...	1410	2.3	600	25.0
AUG				
15...	1430	47	65	27.0

07032248 - CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS TENN (LAT 35 06 02 LONG 090 00 43.01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT . 1976				
18...	1430	3.8	210	16.0
APR . 1977				
02...	1130	3.4	260	22.0
MAY				
10...	1405	1.9	150	23.0
18...	1540	2.8	218	28.0
JUN . 1977				
10...	1045	2.4	300	26.0
20...	1510	2.0	42	24.0
JUL				
26...	1450	1.3	30	25.0
AUG				
24...	1550	1.2	51	25.0

07032260 - CYPRESS CREEK AT NEELY RD, AT MEMPHIS TN (LAT 35 01 36 LONG 090 03 23.01)

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV . 1976				
09...	1140	.01	340	7.0
23...	1420	.02	160	4.0
FEB . 1977				
23...	1540	26	83	11.0
APR				
02...	1105	.23	350	17.5
MAY . 1977				
05...	1140	.05	350	24.5
17...	1140	.01	265	25.0
JUL				
27...	1600	.05	158	19.0

BEDFORD COUNTY

352739086144700. Local number, Bd:H-17.

LOCATION.--Lat 35°27'39", long 86°14'47", Hydrologic Unit 06040002, 1.3 mi (2.1 km) northeast of Normandy. Owner: Tennessee Valley Authority.

AQUIFER.--Bigby-Cannon Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (150 mm), depth 180 ft (55 m), cased to 20 ft (6 m).

INSTRUMENTATION.--Water-level recorder since August 1973.

DATUM.--Altitude of land-surface datum is 810 ft (247 m) above mean sea level. Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.86 ft (5.14 m) below land-surface datum, Mar. 30, 1975; lowest 27.31 ft (8.32 m) below land-surface datum, Sep. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, AUGUST TO SEPTEMBER 1973
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--	--	--	--	--	25.63
20	--	--	--	--	--	--	--	--	--	--	--	25.97
25	--	--	--	--	--	--	--	--	--	--	--	26.01
EOM	--	--	--	--	--	--	--	--	--	--	--	25.91

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.97	25.89	25.40	23.16	23.19	24.93	24.22	25.78	25.12	26.18	26.23	26.13
10	25.95	25.87	25.94	--	24.32	24.69	24.53	25.86	25.52	24.93	25.78	26.00
15	25.94	26.10	25.23	23.03	23.32	25.04	25.05	25.43	25.83	25.98	25.95	26.19
20	26.05	26.23	25.84	24.11	23.76	24.14	25.43	25.43	25.95	26.13	26.21	26.31
25	26.07	26.00	25.29	--	24.12	24.28	25.62	25.27	26.03	26.14	26.23	26.34
EOM	25.64	23.98	23.48	23.55	24.62	24.77	25.77	25.46	26.12	26.09	26.23	26.26

WTR YEAR 1974 MAX 17.74 MAR 21, 1974 MIN 26.34 SEP 24, 25, 1974

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.36	26.99	25.47	24.26	20.84	24.10	23.63	24.48	--	--	25.53	25.35
10	26.37	26.86	24.99	24.12	23.34	24.19	24.06	23.63	--	25.30	25.52	25.33
15	26.35	26.42	25.76	24.38	23.60	--	24.33	--	--	25.42	25.20	25.28
20	26.48	24.13	26.05	22.91	23.17	--	22.98	--	--	25.25	24.93	25.11
25	27.22	25.71	20.90	24.66	23.46	--	24.18	--	--	25.39	25.23	--
EOM	27.28	26.10	23.48	23.60	23.81	21.08	24.45	--	--	25.53	25.22	--

WTR YEAR 1975 MAX 16.86 MAR 30, 1975 MIN 27.29 NOV 1, 1974

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	23.44	--	26.06	26.39	--	26.30	26.11	23.68	26.45	26.77
10	--	--	25.32	--	26.06	26.00	--	26.33	26.74	25.73	26.49	26.47
15	--	--	25.65	--	26.26	25.85	--	25.41	26.50	26.60	26.43	26.42
20	--	--	--	--	25.45	26.00	--	26.58	26.31	26.80	26.42	26.41
25	--	--	--	--	25.99	--	--	26.58	26.60	26.34	26.42	26.41
EOM	--	--	--	25.66	26.29	--	26.39	26.34	26.47	26.54	26.44	26.37

WTR YEAR 1976 MAX 23.22 DEC 5, 1975 MIN 26.96 JUN 24, 1976

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.40	25.33	24.49	26.10	26.62	22.83	20.19	26.89	26.35	26.53	26.49	26.50
10	26.35	24.98	24.74	25.29	26.63	24.05	21.17	26.90	26.39	26.54	26.51	26.55
15	26.39	24.92	25.00	24.65	26.85	20.87	26.07	26.88	26.56	26.47	26.50	27.16
20	26.39	24.12	25.19	26.61	26.63	24.99	26.63	26.61	26.47	26.71	26.59	26.47
25	25.78	24.28	26.57	26.77	25.99	26.43	26.73	26.52	26.58	26.47	26.53	26.48
EOM	25.26	24.28	26.10	26.59	25.20	26.86	26.89	26.51	26.73	26.48	26.57	26.70

WTR YEAR 1977 MAX 20.19 APR 4, 1977 MIN 27.31 SEP 16, 1977

BRADLEY COUNTY

350503084505000. Local number, Br:E-1.

LOCATION.--Lat 35°05'03", long 84°50'50", Hydrologic Unit 03150101, on Trewhitt Road, 0.5 mi (0.8 km) north of Goodwill Road, Cleveland.
Owner: F. G. Trewhitt.

AQUIFER.--Conasauga shale of middle and late Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 36 in (910 mm), depth 25 ft (8 m), casing information not available.

DATUM--Land-surface datum is 850 ft (259 m) above mean sea level. Measuring point: Top of front shelter panel, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--February 1950 to November 1955, April 1964 to current year. Analog record February 1950 to November 1955, April 1964 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.38 ft (2.25 m) below land-surface datum; lowest recorded, 24.97 ft (7.61 m) below land-surface datum; highest water level measured, 8.22 ft (2.51 m) below land-surface datum, Apr. 5, 1977; lowest measured, 22.18 ft (6.76 m) below land-surface datum, Nov. 6, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	20.74	DEC 7	21.38	MAR 1	15.31	APR 5	8.22	JUN 6	16.99	AUG 15	20.75
NOV 9	21.58					MAY 2	13.82	JUL 7	18.95		

CANNON COUNTY

354823086104400. Local number, Cn:D-1.

LOCATION.--Lat 35°48'23", long 86°10'44", Hydrologic Unit 05130203 on county road on Cannon County and Rutherford County lines, 1.5 mi (2.4 km) south of Readyville.
Owner: Ray Barker.

AQUIFER: Lebanon Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter, 6 in (150 mm), depth 30 ft (9 m), cased with steel to unknown depth, open end.

DATUM.--Land-surface datum is 715 ft (218 m) above mean sea level. Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--April 1967 to current year. Analog record April 1967 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.91 ft (0.28 m) below land-surface datum, Mar. 11, 1968; lowest recorded, 19.38 ft (5.91 m) below land-surface datum, Dec. 9, 10, 1968; highest water level measured, 12.14 ft (3.70 m) below land-surface datum, Jan. 8, 1974; lowest measured, 17.80 ft (5.43 m) below land-surface datum, Mar. 6, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
OCT 8	16.61
APR 6	13.86

CARTER COUNTY

361738082132900. Local number, Ct:H-1.

LOCATION.--Lat 36°17'38", long 82°13'29", Hydrologic Unit 06010103, 3.5 mi (5.6 km) south of Elizabethton, 0.8 mi (1.3 km) north of Gap Creek.
Owner: Gap Creek Community.

AQUIFER.--Honaker dolomite of Middle Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 24 in (610 mm), depth 31 ft (9 m), casing information not available.

INSTRUMENTATION.--Water level recorder since April 1964.

DATUM.--Altitude of land-surface datum is 1,820 ft (555 m). Measuring point: Top of concrete tile, 2.50 ft (0.76 m) above land-surface datum.

REMARKS.--Highest water level readings may be influenced for short periods by surface seepage. Missing record Jan. 26 to Feb. 1.

PERIOD OF RECORD.--April 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.23 ft (0.68 m) below land-surface datum, Apr. 4, 1977; lowest, 26.01 ft (7.93 m) below land-surface datum Dec. 22, 23, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.44	14.78	14.99	13.68	14.37	14.92	3.32	12.50	14.95	14.90	16.18	15.57
10	5.48	14.98	14.54	10.84	14.92	14.80	5.46	14.64	14.99	14.96	16.54	15.03
15	14.02	14.98	8.10	12.57	14.86	9.36	8.35	14.87	15.19	15.11	16.99	15.48
20	14.77	15.01	11.57	14.00	14.95	12.87	9.55	14.93	15.21	15.27	14.80	15.14
25	14.96	15.15	13.42	14.20	14.84	12.07	10.27	14.84	13.47	15.68	14.96	15.98
EOM	14.16	14.06	13.76	---	14.93	6.11	10.61	14.95	12.89	15.88	15.05	16.63

WTR YEAR 1977 MAX 2.23 APR 4, 1977 MIN 17.10 AUG 17, 1977

COFFEE COUNTY

352649086131400. Local number, Cf:F-92.

LOCATION.--Lat 35°26'49", long 86°13'14", Hydrologic Unit 06040002, 4.4 mi (7.1 km) northeast of Normandy
Owner: Tennessee Valley Authority

AQUIFER.--Catheys Formation of late Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (150 mm), depth 206 ft (63 m), cased to 42 ft (13 m).

INSTRUMENTATION.--Water-level recorder since August 1973.

DATUM.--Altitude of land-surface datum is 940 ft (287 m) above mean sea level. Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.11 ft (2.78 m) below land-surface datum, Jan. 12, 1974; lowest 13.72 ft (4.18 m) below land-surface datum, Sep. 6, 7, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, AUGUST TO SEPTEMBER 1973
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	--	--	--	--	12.05	12.65
10	--	--	--	--	--	--	--	--	--	--	12.21	12.74
15	--	--	--	--	--	--	--	--	--	--	12.23	12.68
20	--	--	--	--	--	--	--	--	--	--	12.31	12.73
25	--	--	--	--	--	--	--	--	--	--	12.44	12.84
EOM	--	--	--	--	--	--	--	--	--	--	12.57	12.87

COFFEE COUNTY--Continued

352649086131400. Local number, Cf:F-92--Continued

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.87	12.46	11.10	10.26	10.26	11.46	10.97	12.02	11.05	12.15	12.21	12.13
10	12.87	12.53	11.41	10.25	10.97	10.87	11.19	12.06	11.50	11.99	11.73	12.08
15	12.78	12.54	11.12	10.23	11.28	11.15	11.37	11.38	11.87	11.99	11.28	12.18
20	12.81	12.61	11.24	10.89	10.59	11.22	11.74	11.13	12.14	12.24	11.75	12.30
25	12.84	12.22	11.00	10.28	10.69	10.53	11.94	11.43	12.21	12.22	12.05	12.40
EOM	12.50	10.50	10.36	10.29	11.09	11.48	12.08	11.34	12.02	11.99	12.11	12.40

WTR YEAR 1974 MAX 9.11 JAN 12, 1974 MIN 12.91 OCT 7, 8, 1973

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.48	12.19	10.95	10.67	11.07	11.74	10.95	11.89	11.77	12.32	12.78	13.02
10	12.48	12.19	10.79	10.92	11.03	11.88	11.54	11.70	12.01	12.38	12.79	13.08
15	12.55	12.14	11.22	10.74	11.38	10.24	11.87	11.57	11.43	12.41	12.90	12.96
20	12.18	11.55	11.62	10.95	11.02	10.58	11.88	11.18	11.69	12.49	12.88	12.78
25	12.32	11.15	11.77	11.01	11.34	10.54	11.35	11.72	12.00	12.55	12.97	11.43
EOM	12.32	11.51	10.23	11.38	11.47	10.35	11.62	11.66	12.17	12.70	12.96	11.54

WTR YEAR 1975 MAX 10.04 MAR 16, 1975 MIN 13.08 SEP 10, 1975

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.91	11.52	10.92	10.48	11.46	11.58	10.72	12.17	11.09	11.43	12.27	12.58
10	10.77	11.68	11.34	10.84	11.49	11.58	11.39	12.21	11.51	11.14	12.40	12.72
15	11.27	10.67	11.60	10.91	11.69	11.18	11.68	11.74	11.83	11.63	12.53	12.87
20	10.12	11.18	11.06	11.22	10.95	11.28	11.86	11.06	11.99	11.90	12.61	12.97
25	10.98	11.46	11.38	11.46	10.90	11.14	11.97	11.49	12.12	12.04	12.69	13.06
EOM	11.31	11.46	10.87	11.00	11.24	10.68	12.10	11.75	11.80	12.11	12.71	12.89

WTR YEAR 1976 MAX 10.05 OCT 19, 1975 MIN 13.08 SEP 27, 1976

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.85	11.51	11.59	11.63	11.87	10.67	10.74	11.24	12.60	12.64	13.37	13.68
10	12.69	11.86	11.61	11.08	12.10	10.98	10.83	11.54	12.68	12.80	13.50	13.54
15	12.70	12.06	11.35	11.23	11.95	10.54	11.50	11.97	12.77	12.95	13.47	13.51
20	12.82	12.15	11.60	11.50	11.89	11.27	11.90	12.22	12.61	13.09	13.21	12.86
25	12.70	12.32	11.81	11.77	11.38	11.67	11.80	12.32	12.63	13.15	13.34	12.77
EOM	11.41	11.84	11.59	11.80	10.88	11.81	11.86	12.46	12.49	13.21	13.53	12.12

WTR YEAR 1977 MAX 10.15 APR 6, 7, 1977 MIN 13.72 SEP 6, 7, 1977

COFFEE COUNTY--Continued

352625086101000. Local number, Cf:F-93.

LOCATION.--Lat 35°26'25", long 86°10'10", Hydrologic Unit 06040002, 6.5 mi (10.5 km) west of Manchester. Owner: Tennessee Valley Authority.

AQUIFER.--Fort Payne Formation of early Mississippian age and Catheys Formation of late Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (150 mm), depth 207 ft (63 m), cased to 101 ft (31 m).

INSTRUMENTATION.--Water-level recorder since April 1973.

DATUM.--Altitude of land-surface datum is 1,020 ft (311 m) above mean sea level. Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--April 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 97.26 ft (29.64 m) below land-surface datum, Sep. 28, 1977; lowest 118.11 ft (36.00 m) below land-surface datum, Apr. 22, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, APRIL TO SEPTEMBER 1973
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	--	--	102.58	102.62	102.55	103.08
10	--	--	--	--	--	--	--	101.97	102.63	102.58	102.59	102.94
15	--	--	--	--	--	--	102.08	102.78	102.63	102.60	102.60	103.11
20	--	--	--	--	--	--	102.52	102.97	102.61	102.45	102.58	103.46
25	--	--	--	--	--	--	--	102.72	102.62	102.40	102.71	103.48
EOM	--	--	--	--	--	--	--	102.54	102.62	103.01	102.95	103.49

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	103.60	103.57	103.63	102.51	99.92	--	102.74	--	102.35	101.99	101.97	102.18
10	103.54	103.45	103.14	102.60	100.98	--	102.65	--	102.35	102.00	101.85	101.89
15	103.59	103.36	102.82	101.79	101.12	104.50	102.60	--	102.12	102.04	101.76	102.10
20	103.51	103.87	102.73	101.83	--	103.70	102.72	--	102.12	102.36	102.10	101.84
25	103.46	103.83	102.64	101.06	--	102.80	102.64	--	102.39	102.19	101.92	101.72
EOM	103.46	103.78	102.52	100.47	--	102.77	102.56	102.61	102.24	102.00	101.68	102.24

WTR YEAR 1974 MAX 99.82 FEB 5, 1974 MIN 104.80 MAR 13, 1974

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	101.70	101.37	101.85	104.16	102.19	102.81	102.63	107.01	106.35	106.75	--	--
10	102.04	101.92	101.67	103.25	102.29	103.17	104.91	106.83	106.28	106.77	--	--
15	101.94	101.91	103.06	102.53	102.21	102.77	104.80	106.07	106.39	--	--	--
20	101.76	101.84	103.29	102.44	102.17	102.73	106.64	105.68	106.48	--	--	--
25	101.55	101.69	102.86	102.38	102.18	102.68	105.83	105.69	106.42	--	--	--
EOM	101.41	101.93	102.79	102.48	102.18	102.41	104.76	106.72	106.23	--	--	--

WTR YEAR 1975 MAX 101.29 NOV 4, 1974 MIN 107.24 MAY 7, 1975

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	--	114.72	108.96	--	--	--
10	--	--	--	--	--	--	--	113.86	108.18	--	--	--
15	--	--	--	--	--	--	--	113.14	107.58	--	--	--
20	--	--	--	--	--	--	--	112.51	107.13	--	--	101.15
25	--	--	--	--	--	--	--	111.09	106.79	--	--	100.99
EOM	--	--	--	--	--	--	115.51	109.76	--	--	--	--

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	100.93	100.66	101.31	101.60	102.33	102.32	102.05	101.64	99.82	98.05
10	--	--	100.92	100.33	101.45	101.57	102.06	102.28	101.96	101.52	99.44	97.88
15	--	--	100.84	100.91	101.42	101.83	102.22	102.24	101.83	101.44	99.13	97.59
20	--	101.15	100.92	101.25	101.44	102.08	102.30	102.22	101.72	101.36	98.86	97.38
25	--	101.08	100.81	101.39	101.42	102.30	102.34	102.19	101.68	101.18	98.62	97.49
EOM	--	100.87	100.36	101.46	101.46	101.95	102.27	102.11	101.60	100.13	98.24	97.34

WTR YEAR 1977 MAX 97.26 SEP 28, 1977 MIN 102.46 MAR 28, 1977

COFFEE COUNTY--Continued

352757086054500. Local number, Cf:G-44.

LOCATION.--Lat 35°27'57", long 86°05'45", Hydrologic Unit 06040002, 1.1 mi (7.4 km) southwest of Manchester. Owner: Tennessee Valley Authority.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (150 mm), depth 165 ft (50 m), cased to 70 ft (21 m).

INSTRUMENTATION.--Water-level recorder since March 1973.

DATUM.--Altitude of land-surface datum is 1,055 ft (322 m) above mean sea level. Measuring point: Top of casing, 1.80 ft (0.55 m) above land-surface datum.

PERIOD OF RECORD.--March 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.62 ft (2.63 m) below land-surface datum, Mar. 31, 1973; lowest 33.16 ft (10.11 m) below land-surface datum, Nov. 16, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, MARCH TO SEPTEMBER 1973
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	13.13	--	--	19.00	23.39	--
10	--	--	--	--	--	--	--	--	14.62	21.10	24.25	--
15	--	--	--	--	--	--	--	--	17.34	20.90	--	--
20	--	--	--	--	--	--	--	--	16.76	15.30	--	--
25	--	--	--	--	--	--	--	--	18.73	19.53	--	--
EOM	--	--	--	--	--	9.15	--	--	20.16	22.05	--	--

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1973 TO SEPTEMBER 1974
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.21	30.89	26.30	11.84	9.86	16.57	10.90	22.06	18.26	24.97	26.21	28.88
10	29.59	31.31	28.23	9.90	12.67	12.41	11.36	22.79	20.67	16.20	26.47	29.06
15	29.86	31.34	22.43	10.66	10.32	14.10	14.37	19.39	21.92	22.61	26.35	29.64
20	30.28	31.72	26.50	12.92	10.19	11.09	18.32	19.79	23.04	24.26	27.39	30.06
25	30.60	30.91	22.54	9.86	10.89	11.42	19.90	17.75	23.98	25.17	27.95	30.56
EOM	30.21	22.00	12.84	10.47	14.22	10.46	21.22	19.00	24.89	25.28	28.47	30.70

WTR YEAR 1974 MAX 8.63 MAR 21, 1974 MIN 31.72 NOV 20, 1973

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.40	32.86	--	--	11.16	19.27	15.52	18.42	22.43	--	--	--
10	31.53	32.97	--	--	15.64	20.81	18.07	12.18	23.69	26.58	--	--
15	31.71	33.12	--	--	16.85	11.06	20.18	18.89	--	27.50	--	--
20	31.85	27.28	--	11.49	12.63	11.09	12.62	16.63	--	27.18	--	--
25	32.25	28.76	--	14.54	13.60	10.59	18.37	19.98	--	--	--	--
EOM	32.49	30.16	--	16.07	17.85	10.22	16.07	20.76	--	--	--	--

WTR YEAR 1975 MAX 9.08 MAR 30, 1975 MIN 33.16 NOV 16, 1974

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.51	24.55	20.34	12.69	18.94	20.34	14.51	23.99	18.80	24.24	27.45	--
10	17.50	24.69	19.21	15.94	18.50	12.07	18.51	24.28	22.07	24.24	27.97	--
15	26.12	16.72	22.83	12.02	20.95	14.04	19.02	12.03	23.35	24.27	28.33	28.77
20	15.33	22.50	20.73	18.64	11.97	18.30	20.81	19.26	23.85	25.26	28.93	29.28
25	23.93	23.60	22.94	14.47	15.03	16.73	22.03	21.48	25.15	26.07	28.21	29.98
EOM	20.01	22.91	14.13	16.17	18.37	9.52	23.28	23.10	24.93	26.89	--	27.24

WTR YEAR 1976 MAX 9.18 MAR 31, 1976 MIN 30.05 SEP 27, 1976

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.42	--	--	--	--	--	--	--	--	30.76	--	--
10	27.24	--	--	--	--	--	--	--	--	30.66	--	31.47
15	28.82	--	--	--	--	--	--	--	--	30.69	--	--
20	29.47	28.02	--	--	25.85	--	--	--	--	31.32	--	--
25	--	28.91	--	--	--	19.22	--	--	30.49	31.72	--	--
EOM	--	--	21.38	--	--	--	--	--	30.80	--	--	--

CROCKETT COUNTY

354253089051300. Local number, Ck:B-5.

LOCATION.--Lat 35°42'53", long 89°05'13", Hydrologic Unit 08010205, at U.S. Highway 79, Bells.
Owner: Winter Garden Freezer Company.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 to 6 in (250 to 150 mm), depth 537 ft (164 m), cased to 523 ft (159 m), screened 523 to 537 ft (159 to 164 m).

INSTRUMENTATION.--Water-level recorder since May 1961.

DATUM.--Altitude of land-surface datum is 350 ft (107 m). Measuring point: Top of casing, 1.10 ft (0.34 m) above land-surface datum.

PERIOD OF RECORD.--May 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 37.96 ft (11.57 m) below land-surface datum, Mar. 14, 1975; lowest, 43.92 ft (13.39 m) below land-surface datum, Nov. 4, 1971.

WATER LEVEL IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.2	42.0	--	--	--	39.6	40.3	40.2	41.3	41.7	42.3	42.4
10	42.3	42.0	--	--	40.2	38.9	40.2	40.7	41.3	41.8	42.4	42.5
15	42.3	42.0	--	--	40.1	39.0	39.7	40.9	41.1	41.9	42.2	42.4
20	42.4	--	--	--	40.2	39.3	39.6	41.1	41.0	42.0	41.8	42.2
25	42.0	--	--	--	39.8	39.8	40.0	41.2	41.3	42.1	42.3	--
EOM	42.0	--	--	--	39.8	39.6	40.1	41.0	41.5	42.1	42.4	41.1

WTR YEAR 1977 MAX 38.6 MAR 18, 1977 MIN 42.5 SEP 10-12, 1977

CUMBERLAND COUNTY

354922085053500. Local number, Cu:C-1.

LOCATION.--Lat 35°49'22", long 85°05'35", Hydrologic Unit 06010208, 9 mi (14 km) southwest of Crossville, 3.8 mi (6.1 km) south of Lantana, 0.6 mi (1.0 km) south of Vandever Community.
Owner: Hubert Roy.

AQUIFER.--Rockcastle conglomerate of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (150 mm), depth 69 ft (21 m), cased to 69 ft (21 m).

DATUM.--Altitude of land-surface datum is 1,970 ft (600 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--September 1964 to current year. Analog record September 1964 to September 1975, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.15 ft (4.01 m) below land-surface datum, Mar. 17, 1973; lowest recorded, 24.92 ft (7.60 m) below land-surface datum, Nov. 16, 1968; highest water level measured, 15.03 ft (4.58 m) below land-surface datum, Jan. 7, Apr. 5, 1976; lowest measured, 23.25 ft (7.09 m) below land-surface datum, Aug. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	17.88	JAN 05	16.34	MAR 01	15.61	JUN 23	20.97
DEC 01	18.88	FEB 07	18.82	APR 12	16.11	AUG 18	23.25

DEKALB COUNTY

355807085511800. Local number, Dk:F-1.

LOCATION.--Lat 35°58'07", long 85°51'18", Hydrologic Unit 05130108, at U. S. Highway 70 and Allens Ferry Road, 0.8 mi (1.3 km) northwest of Smithville.
Owner: Tennessee Department of Highways.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled water-table test well, diameter 6 in (150 mm), depth 186 ft (57 m), cased to 55 ft (17 m), open end.

DATUM--Land-surface datum is 1,128 ft (344 m) above mean sea level. Measuring point: Top of shelter, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--March 1968 to current year. Analog record March 1968 to December 1973, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 18.32 ft (5.58 m) below land-surface datum, Mar. 24, 1973; lowest recorded 35.18 ft (10.72 m) below land-surface datum, Dec. 17, 1968; highest water level measured, 18.76 ft (5.72 m) below land-surface datum, Feb. 19, 1974; lowest measured, 30.62 ft (9.33 m) below land-surface datum, Oct. 6, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
OCT 6	30.62
APR 13	22.77

DICKSON COUNTY

360429087233602. Local number, Di:F-19.

LOCATION.--Lat 36°04'29", long 87°23'36", Hydrologic Unit 06040003, on north side of State Highway 48, 0.4 mi (0.6 km) northeast of State Highway 48 bridge over East Piney River at Dickson.
Owner: City of Dickson.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (150 mm), depth 387 ft (118 m), cased to 22 ft (6.7 m), open end.

INSTRUMENTATION.--Water-level recorder since July 1960.

DATUM.--Altitude of land-surface datum is 755 ft (230 m). Measuring point: Top of casing at land-surface datum.

PERIOD OF RECORD.--July 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.52 ft (2.29 m) below land-surface datum, Mar. 12, 13, 1975; lowest 33.80 ft (10.3 m) below land-surface datum, Sept. 26, 27, 1976 and Sept. 7, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.57	30.40	33.33	33.43	33.30				33.56		33.64	33.74
10	32.44	32.76	33.22	32.79	33.43						33.67	33.74
15	33.41	33.23	33.02	30.50	31.87						33.53	32.89
20	33.63	33.41	33.29	30.32	32.64						33.47	32.82
25	30.47	33.57	33.42	31.82	22.76						33.33	32.67
EOM	27.35	33.09	33.50	32.99	22.82		27.93		31.88	33.26	33.66	29.99

WTR YEAR 1977 MAX 9.72 MAR 4, 1977 MIN 33.80 SEP 7, 1977

DYER COUNTY

360200089280100. Local number, Dy:H-1.

LOCATION.--Lat 36°02'00", long 89°28'01", Hydrologic Unit 08010206, 4.0 mi (6.4 km) west of Dyersburg on State Highway 20 at Finley.
Owner: U.S. Geological Survey.

AQUIFER.--Fluvial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (100 mm), depth 70 ft (21 m), cased to 60 ft (18 m), screened 60 to 70 ft (18 to 21 m).

DATUM.--Altitude of land-surface datum is 278 ft (85 m). Measuring point: Top of casing, 1.00 ft (.30 m) above land-surface datum.

PERIOD OF RECORD.--April 1955 to current year. Analog record April 1955 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.69 ft (1.12 m) below land surface datum, Feb. 28, 1962; lowest recorded, 18.93 ft (5.77 m) below land surface datum, Jan. 18-21, 1957; highest water level measured, 4.22 ft (1.29 m) below land-surface datum, Mar. 20, 1975; lowest measured, 16.64 ft (5.07 m) below land-surface datum, Sept. 15, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	14.60	FEB 9	14.40	MAY 4	11.84	JUL 29	15.73
NOV 18	14.92	MAR 23	11.44	JUN 8	13.99	SEP 15	16.64

360147089230700. Local number, Dy:H-7.

LOCATION.--Lat 36°01'47", long 89°23'07", Hydrologic Unit 08010204, 500 ft (152 m) east of U.S. Highway 51 and on south side of Illinois Central railroad, at Dyersburg.
Owner: City of Dyersburg.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 10 in (610 to 250 mm), depth 656 ft (200 m), cased to 605 ft (184 m), screened 605 to 655 ft (184 to 200 m).

DATUM.--Land-surface datum is 270.07 ft (82.32 m) above mean sea level. Measuring point: Top of casing 3.10 ft (0.94 m) above land-surface datum.

PERIOD OF RECORD.--February 1954 to current year. Analog record February 1954 to February 1971, periodic measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.69 ft (0.82 m) above land-surface datum, Mar. 1, 2, Apr. 19, 1962; lowest recorded, 17.1 ft (5.2 m) below land-surface datum, Aug. 10, 1956; highest water level measured, 0.20 ft (0.06 m) above land-surface datum, Mar. 20, 1975, lowest measured, 10.22 ft (3.12 m) below land surface datum, September 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	7.95	FEB 8	3.98	MAY 4	2.93	JUL 29	6.00
NOV 18	4.70	MAR 23	3.25	JUN 8	6.20	SEP 15	7.73

FAYETTE COUNTY

352226089330101. Local number, Fa:R-1.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft (24 m) south of State Highway 59, 1.2 mi (1.9 km) southeast of U.S. Highway 70, near Braden.
Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in (150 to 100 mm), depth 1,025 ft (312 m), cased to 1,008 ft (307 m), screened 1,008 to 1,025 ft (307 to 312 m).

DATUM.--Land-surface datum is 317.50 ft (96.77 m) above mean sea level. Measuring point: Top of casing, 3.70 ft (1.13 m) above land-surface datum.

PERIOD OF RECORD.--August 1949 to current year. Analog record August 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 64.89 ft (19.78 m) below land-surface datum, Aug. 31, 1949: lowest recorded, 76.26 ft (23.24 m) below land-surface datum, Dec. 5, 1970; highest water level measured, 73.61 ft (22.44 m) below land-surface datum, Apr. 28, 1976; lowest measured, 76.98 ft (23.46 m) below land-surface datum, November 1971.

CORRECTIONS.--The date for the highest water level recorded for period of record is Aug. 31, 1949. The date previously published in WSP 1978, 2171, WDR TN-75-1, WDR TN-76-1 is incorrect.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	74.01	JAN 27	73.99	APR 1	74.23	MAY 27	74.50	JUL 29	75.24
DEC 2	74.10	FEB 25	74.12	MAY 10	74.49	JUN 28	74.86	SEP 1	75.66

352226089330102. Local number, Fa:R-2.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft (24 m) south of State Highway 59, 1.1 mi (1.8 km) southeast of U.S. Highway 70, near Braden.
Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in (150 to 100 mm), depth 365 ft (111 m), cased to 345 ft (105 m), screened 345 to 365 ft (105 to 111 m).

DATUM.--Land-surface datum is 317.20 ft (96.68 m) above mean sea level. Measuring point: Top of casing, 4.20 ft (1.28 m) above land-surface datum.

PERIOD OF RECORD.--October 1949 to current year. Analog record October 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.25 ft (11.35 m) below land-surface datum, Mar. 10, 1952; lowest recorded, 42.12 ft (12.84 m) below land-surface datum, Nov. 30, 1967; highest water level measured, 39.58 ft (12.06 m) below land-surface datum, Apr. 28, 1976; lowest measured, 41.67 ft (12.70 m) below land-surface datum, December 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 4	40.10	JAN 27	40.04	APR 1	40.15	MAY 27	40.12	JUL 29	40.66
DEC 2	40.27	FEB 25	40.15	MAY 10	40.15	JUN 28	40.41	SEP 1	40.89

HAMILTON COUNTY

351428085003600. Local number, Hm:0-15.

LOCATION.--Lat 35°14'28", long 85°00'36", Hydrologic Unit 06020001, at Smith Road and State Highway 58, near Snow Hill.
Owner: Savannah Valley Utility District.

AQUIFER.--Knox Dolomite of the Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 10 in (250 mm), depth 262 ft (80 m), cased to 50 ft (15 m), open end.

INSTRUMENTATION.--Water-level recorder since May 1975.

DATUM.--Altitude of land-surface datum is 735 ft (224 m) above mean sea level. Measuring point: Top of back shelter panel, 8.00 ft (2.44 m) above land-surface datum.

REMARKS.--Well previously published as "at Savannah Valley". Water level affected intermittently by pumping from municipal supply well 300 ft (91 m) south. Negative values indicate water levels above ground level.

PERIOD OF RECORD.--May 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level 3.85 ft (1.17 m) above land-surface datum, Apr. 4, 1977; lowest, 7.73 ft (2.36 m) below land-surface datum, Aug. 31, Sept. 1, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.73	6.66	6.06	5.10	6.34	2.63	-2.25	4.03	6.30	6.65	6.85	7.20
10	6.76	6.77	4.91	.77	6.65	1.45	- .02	4.75	6.31	6.83	6.71	6.19
15	7.28	6.87	4.50	1.97	6.74	- .05	1.97	5.35	6.51	6.76	6.90	6.32
20	7.03	6.84	4.61	4.14	6.71	2.42	4.23	5.80	6.43	6.86	6.93	1.80
25	6.79	6.86	5.20	5.74	4.79	4.51	.15	5.91	6.49	6.89	7.10	4.95
EOM	6.48	4.64	4.89	5.96	2.97	-1.12	2.42	6.05	6.68	6.85	7.07	5.00

WTR YEAR 1977 MAX -3.85 APR 4, 1977 MIN 7.20 SEP 5, 1977

HUMPHREYS COUNTY

360020087573300. Local number, Hs:H-1.

LOCATION.--Lat 36°00'20", long 87°57'33", Hydrologic Unit 06040005, 100 ft (30 m) north of Woodland Drive at New Johnsonville.
Owner: A. M. Powers.

AQUIFER.--Camden Chert of early Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (200 mm), depth 187 ft (57 m), cased to 72 ft (22 m), open end.

INSTRUMENTATION.--Water-level recorder since February 1962.

DATUM.--Altitude of land-surface datum is 470 ft (143 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 85.02 ft (25.91 m) below land-surface datum, Mar. 25, 1973; lowest, 90.20 ft (27.49 m) below land-surface datum, Nov. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	87.16		87.19	87.26	87.22	86.51	86.50	86.26	86.82	87.04	87.34	87.46
10	87.23		87.20	87.28	87.19	86.53	86.48	86.38	86.95	87.02	87.33	87.55
15	87.21	87.13	87.10	87.05	87.11	86.45	86.53	86.48	86.91	87.06	87.33	87.42
20	87.22	87.13	87.22	87.10	87.06	86.58	86.60	86.58	86.93	87.14	87.31	87.37
25	87.01	87.17	87.15	87.06	86.88	86.64	86.25	86.61	86.91	87.19	87.42	87.29
EOM	87.04	87.19	87.31	87.18	86.87	86.80	86.33	86.78	86.94	87.22	87.46	87.06

WTR YEAR 1977 MAX 86.22 MAY 5, 1977 MIN 87.57 SEP 11, 1977

LAUDERDALE COUNTY

353839089493500. Local number, Ld:F-4.

LOCATION.--Lat 35°38'39", long 89°49'35", Hydrologic Unit 08010208, 1.1 mi (1.8 km) north of State Highway 87, at Fort Pillow State Park.
Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6 to 3 in (200 to 150 to 80 mm), depth 879 ft (268 m), cased to 869 ft (265 m), screened 869 to 879 ft (265 to 268 m).

INSTRUMENTATION.--Water-level recorder since April 1966.

DATUM.--Land-surface datum is 437.05 ft (133.21 m) above mean sea level. Measuring point: Top of casing, 2.80 ft (0.85 m) above land-surface datum.

PERIOD OF RECORD.--April 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 187.76 ft (57.23 m) below land-surface datum, Apr. 7, 1975; lowest, 197.64 ft (60.24 m) below land-surface datum, Sept. 10, 1977.

CORRECTIONS.--The date for the highest water level for period of record is Apr. 7, 1975. The date previously published in WRD TN-75-1 and WDR TN-76-1 is incorrect.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	196.2	196.3	196.4	196.7	195.8	195.2	195.8	196.5	196.5	197.3	197.6
10	196.2	196.2	196.3	196.5	196.8	195.1	194.9	195.9	196.6	196.6	197.5	197.6
15	196.3	196.4	196.2	196.5	196.7	194.5	194.4	195.8	196.7	196.7	197.4	197.5
20	196.3	196.2	196.2	196.6	196.6	194.6	195.1	196.0	196.7	196.8	197.1	197.5
25	196.2	196.2	196.2	196.6	196.2	195.4	195.5	196.2	196.8	197.0	197.1	197.1
EOM	196.2	196.1	196.5	196.7	196.3	195.5	195.9	196.4	196.6	197.1	197.4	197.0

WTR YEAR 1977 MAX 194.3 APR 15, 1977 MIN 197.6 SEP 5-11, 1977

MADISON COUNTY

354223088380200. Local number, Md:N-1.

LOCATION.--Lat 35°42'23", long 88°38'02", Hydrologic Unit 08010205, 90 ft (27 m) south of State Highway 20, about 0.4 mi (0.6 km) east of Claybrook.
Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--McNairy Sand of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in (150 to 100 mm), depth 659 ft (201 m), cased to 639 ft (195 m), screened 639 to 659 ft (195 to 201 m).

DATUM.--Land-surface datum is 562.70 ft (171.51 m) above mean sea level. Measuring point: Top of casing, 2.80 ft (0.85 m) above land-surface datum.

PERIOD OF RECORD.--June 1949 to current year. Analog record June 1949 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 124.50 ft (37.95 m) below land-surface datum, Mar. 10, 1952; lowest recorded, 129.13 ft (39.36 m) below land-surface datum, Nov. 15, 1963; highest water level measured, 125.02 ft (38.11 m) below land-surface datum, June 9, 1976; lowest measured, 128.06 ft (39.03 m) below land-surface datum, October and November 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 6	125.74	JAN 5	125.67	MAR 22	125.65	JUN 6	125.88	SEP 13	126.55
NOV 16	125.75	FEB 10	125.81	MAY 3	125.59	JUL 27	126.31		

PUTNAM COUNTY

360521085432600. Local number Pm:C-1.

LOCATION.--Lat 36°05'21", long 86°43'26", Hydrologic Unit 05130108, at Interstate 40 and State Highway 56, Silver Point.
Owner: Tennessee Department of Highways.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in (150 mm), depth 175 ft (53 m), cased to 60 ft (18 m), open end.

INSTRUMENTATION.--Water-level recorder since March 1968.

DATUM.--Altitude of land-surface datum is 1,030 ft (314 m). Measuring point: Top of shelter, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--March 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.30 ft (14.72 m) below land-surface datum, May 2, 1974; lowest, 53.48 ft (16.30 m) below land-surface datum, Dec. 23, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.26	52.51	52.71	52.89	52.88	52.83	52.49	52.28	52.44	52.71	52.99	52.77
10	52.33	52.51	52.71	52.98	52.88	52.73	52.36	52.30	52.50	52.76	52.99	52.81
15	52.36	52.56	52.67	52.83	52.91	52.66	52.30	52.31	52.55	52.81	52.93	52.88
20	52.43	52.56	52.78	52.83	52.90	52.62	52.29	52.32	52.60	52.86	52.84	52.80
25	52.43	52.60	52.74	52.79	52.93	52.56	52.24	52.33	52.59	52.88	52.81	52.78
EOM	52.47	52.68	52.89	52.83	52.92	52.58	52.29	52.40	52.66	52.95	52.79	52.67

WTR YEAR 1977 MAX 52.14 APR 4, 1977 MIN 53.01 AUG 4, 1977

SEVIER COUNTY

353841083345500. Local number, Sv:E-1.

LOCATION.--Lat 35°38'41", long 83°34'55", Hydrologic Unit 06010201, 3.8 mi (6.1 km) southwest of Great Smoky Mountains National Park Headquarters, near Gatlinburg.
Owner: National Park Service.

AQUIFER.--Elkmont Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well in phyllite, sandstone, diameter 6 1/4 in (160 mm), depth 215 ft (66 m), cased to 30 ft (9 m).

INSTRUMENTATION.--Water-level recorder since March 1970.

DATUM.--Altitude of land-surface datum is 2,400 ft (730 m). Measuring point: Floor of recorder shelter 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--March 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.02 ft (5.49 m) below land-surface datum, Mar. 16, 1973; lowest, 27.75 ft (8.46 m) below land surface datum Oct. 28, 29, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.80	26.07	26.19	24.90	25.47	24.71	19.78	25.01	26.83	25.72	26.86	26.19
10	26.45	26.08	25.86	24.70	25.63	24.21	22.52	25.21	26.94	26.05	26.88	25.92
15	26.37	26.14	25.36	24.29	25.68	22.40	23.41	25.38	27.00	26.28	26.41	25.97
20	26.43	26.26	25.06	24.66	25.68	23.35	24.14	26.49	26.93	26.44	24.63	25.97
25	26.47	26.34	25.11	24.97	25.59	24.09	24.49	26.58	26.08	26.58	25.51	26.02
EOM	26.08	26.30	25.20	25.28	25.15	24.02	24.81	26.72	25.15	26.74	25.99	25.94

WTR YEAR 1977 MAX 18.25 APR 5, 1977 MIN 27.01 JUN 16, 1977

SHELBY COUNTY

350514089553700. Local number, Sh:K-75.

LOCATION.--Lat 35°05'14", long 89°55'37", Hydrologic Unit 08010211, at Willowview Ave. and Getwell Road, Memphis. Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Fluvial sand and gravel of Pleistocene age and possibly sand of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (150 mm), depth 91 ft (28 m), cased to 81 ft (25 m), screened 81 to 91 ft (25 to 28 m).

INSTRUMENTATION.--Water-level recorder since August 1948.

DATUM.--Altitude of land-surface datum is 260 ft (79 m). Measuring point: Top of casing, 1.20 ft (0.37 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--August 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.28 ft (6.49 m) below land-surface datum, Apr. 2, 1950; lowest, 49.62 ft (15.12 m) below land-surface datum, Aug. 9, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.5	45.7	45.7	45.7	45.7	46.3	46.3	--	--	45.9	46.0	46.5
10	45.7	45.7	45.7	45.9	45.7	46.1	45.9	--	--	46.1	46.2	46.7
15	45.5	45.6	45.7	45.7	45.9	46.3	45.7	--	--	46.1	46.3	46.7
20	45.6	45.7	45.8	45.7	45.9	46.1	45.6	--	--	46.0	46.3	46.7
25	45.5	45.7	45.6	45.7	45.9	46.3	45.7	--	--	46.0	46.4	46.6
EOM	45.5	45.7	45.8	45.7	46.1	46.3	45.7	--	45.9	46.0	46.5	46.6

WTR YEAR 1977 MAX 45.0 OCT 30, 1976 MIN 46.8 SEP 16, 1977

351435090005200. Local number, Sh:O-1.

LOCATION.--Lat 35°14'35", long 90°00'52", Hydrologic Unit 08010209, west side of O.K. Robertson Road 0.4 mi north of U.S. Highway 51, Memphis.
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (150 mm), depth 434 ft (132 m), cased to 424 ft (129 m), screened 424 to 434 ft (129 to 132 m).

INSTRUMENTATION.--Water-level recorder since September 1940.

DATUM.--Land-surface datum is 228.70 ft (69.71 m) above mean sea level. Measuring point: Top of casing, 4.30 ft (1.31 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--September 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.65 ft (3.86 m) below land-surface datum, Sept. 3, 1940; lowest, 58.54 (17.84 m) below land-surface datum, Aug 14, Sept. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	55.8	55.2	54.5	54.8	55.0	53.8	52.4	53.9	--	56.3	58.0	58.5
10	55.7	54.4	54.6	54.5	55.5	53.3	52.5	54.4	--	56.3	58.3	--
15	55.8	54.7	54.6	54.1	55.4	52.4	51.9	54.4	--	56.8	58.5	--
20	55.7	54.8	54.8	54.2	54.7	52.0	52.0	54.9	--	57.1	58.2	--
25	55.6	54.4	55.1	54.2	54.3	52.0	52.5	55.5	--	57.3	58.0	--
EOM	55.8	54.0	54.8	54.6	54.5	52.6	53.4	--	56.1	57.9	58.3	57.0

WTR YEAR 1977 MAX 51.9 MAR 21, 22, APR 14-16, 22-23, 1977 MIN 58.5 AUG 14, SEP 8, 1977

SHELBY COUNTY--CONTINUED

350923090023500. Local number, Sh:O-124.

LOCATION.--Lat 35°09'23", long 90°02'35", Hydrologic Unit 08010I00, at Fifth Street and Sycamore Avenue, Memphis. Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Unused work shaft to tunnel connected to an unknown number of drilled artesian wells, diameter of shaft 30 in (760 mm), depth 98 ft (30 m), cased to 80 ft (24 m).

INSTRUMENTATION.--Water-level recorder since September 1938.

DATUM.--Land-surface datum is 229.70 ft (70.01 m) above mean sea level. Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--May 1927 to 1933, 1936 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.09 ft (5.82 m) below land-surface datum, Apr. 1, 1933; lowest, 73.4 ft (22.4 m) below land-surface datum, July 30 to Aug. 1, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	69.5	69.5	69.6	70.3	69.4	69.0	69.3	70.9	71.5	72.0	71.9
10	70.1	69.5	69.5	69.8	70.2	68.6	68.7	69.3	71.0	71.9	72.0	71.9
15	70.0	69.7	69.5	69.9	69.9	68.0	68.7	69.3	71.5	72.0	72.1	71.8
20	69.9	69.8	69.5	70.0	69.7	67.8	68.0	69.4	71.6	71.5	72.5	71.7
25	69.9	69.6	69.5	70.3	69.6	67.7	69.0	69.9	71.9	71.2	72.5	--
EOM	69.6	69.5	69.5	70.3	69.8	69.2	69.3	70.3	71.9	71.3	72.0	71.4

WTR YEAR 1977 MAX 67.0 MAR 21, 22, 1977 MIN 72.6 AUG 28, 1977

351320089535800. Local number, Sh:P-1.

LOCATION.--Lat 35°13'20", long 89°53'58", Hydrologic Unit 08010210, at Scheibler Road, 0.2 mi (0.3 km) east of Yale Road, Memphis.
Owner: Memphis Light, Gas and Water Division, City of Memphis

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (150 mm), depth 344 ft (105 m), cased to 334 ft (102 m), screened 334 to 344 ft (102 to 105 m).

INSTRUMENTATION.--Water-level recorder since July 1941.

DATUM.--Land-surface datum is 299.80 ft (91.38 m) above mean sea level. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--September 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 63.33 ft (19.30 m) below land-surface datum, Sept. 27, 1940; lowest, 116.86 ft (35.62 m) below land-surface datum, Aug. 11-15, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	112.2	113.1	111.1	111.6	111.9	111.2	110.8	111.5	114.4	115.3	116.3	116.6
10	112.7	112.5	111.4	111.5	112.0	111.3	111.3	112.1	--	115.8	116.7	116.6
15	113.1	111.8	111.3	111.8	111.9	110.9	111.6	112.7	--	115.7	116.8	116.5
20	113.3	111.6	111.7	111.9	111.7	110.7	111.6	113.1	--	116.2	116.7	116.1
25	113.2	111.4	111.7	111.9	111.3	110.5	111.4	113.5	--	116.1	--	115.7
EOM	113.1	111.3	111.4	112.1	111.1	111.0	111.3	113.5	115.0	116.2	--	115.5

WTR YEAR 1977 MAX 110.3 MAR 28, 1977 MIN 116.9 AUG 11-15, 1977

SHELBY COUNTY--Continued

350735089593300. Local number, Sh:P-76.

LOCATION.--Lat 35°07'35", long 89°59'33", Hydrologic Unit 08010210, at Central Avenue and Tanglewood Street, Memphis.
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled artesian unused well, diameter 12 in (300 mm), depth 488 ft (149 m), cased to 428 ft (130 m), screened 428 to 488 ft (130 to 149 m).

INSTRUMENTATION.--Water-level recorder since October 1932.

DATUM.--Land-surface datum is 286.70 ft (87.39 m) above mean sea level. Measuring point: Top of casing, 1.30 ft (0.40 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--October 1928 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft (17.88 m) below land-surface datum, Apr. 3, 1933; lowest, 144.77 ft (44.13 m) below land-surface datum, July 20-25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	136.3	135.6	134.8	136.0	138.3	136.1	134.5	136.0	140.6	141.4	144.6	143.5
10	136.4	134.9	135.3	136.3	137.2	135.2	134.6	136.6	141.8	143.7	144.6	--
15	137.6	135.4	134.8	137.9	136.5	134.5	136.1	137.0	142.5	144.4	142.9	--
20	137.0	135.7	135.5	139.0	136.4	134.7	136.0	138.4	141.5	144.8	141.7	--
25	136.0	135.1	135.4	138.8	136.4	135.1	135.4	139.0	142.8	144.8	141.8	--
EOM	136.0	133.9	134.7	138.4	136.4	135.7	135.6	138.8	142.8	144.3	142.7	142.1

WTR YEAR 1977 MAX 133.2 DEC 27, 28, 1976 MIN 144.8 JUL 20-25, 1977

350900089482300. Local number, Sh:Q-1.

LOCATION.--Lat 35°09'00", long 89°48'23", Hydrologic Unit 08010210, south of Macon Road, 0.6 mi (1.0 km) west of Germantown Road, near Memphis.
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (150 mm), depth 384 ft (117 m), cased to 375 ft (114 m), screened 375 to 384 ft (114 to 117 m).

INSTRUMENTATION.--Water-level recorder since October 1940.

DATUM.--Land-surface datum is 330.40 ft (100.71 m) above mean sea level. Measuring point: Top of casing, 2.40 ft (0.73 m), above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--October 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 74.08 ft (22.58 m) below land-surface datum, Dec. 27, 1940; lowest 101.72 ft (31.00 m) below land-surface datum, Sept. 11-13, 16-18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	99.8	--	99.8	100.0	100.3	100.0	99.9	99.8	100.8	101.1	101.3	101.6
10	99.9	--	99.8	100.0	100.1	99.9	99.9	100.0	100.9	101.1	101.4	101.7
15	99.8	--	99.7	100.0	100.3	99.8	99.7	100.0	101.1	101.2	101.5	101.7
20	100.0	--	99.9	100.3	100.0	99.9	99.8	100.1	100.9	101.2	101.5	101.7
25	99.8	--	99.8	100.3	99.9	99.9	99.8	100.3	101.0	101.2	101.5	101.5
EOM	99.9	99.9	100.3	100.3	100.2	100.0	99.9	100.3	101.0	101.7	101.6	101.5

WTR YEAR 1977 MAX 99.5 DEC 6, 7, 20, 1976, MAR 28, APR 4-5, 1977 MIN 101.7 SEP 11-13, 16-18, 1977

SHELBY COUNTY--Continued

352112089571200. Local number, Sh:U-1.

LOCATION.--Lat 35°21'12", long 89°57'12", Hydrologic Unit 08010209, 3 mi (4.8 km) west of Millington at Shelby Road and Shake Rag Road, Sloanville.
Owner: T. D. Ervin.

AQUIFER.--Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 16 in (610 to 410 mm), depth 1,558 ft (475 m), cased to 1,497 ft (456 m), screened 1,497 to 1,558 ft (456 to 475 m).

DATUM.--Land-surface datum is 264.20 ft (80.53 m) above mean sea level. Measuring point: Top of casing, 0.60 ft (0.18 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--August 1946 to current year. Analog record March 1948 to January 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.20 ft (10.12 m) below land-surface datum, Apr. 21, 1947; lowest, 60.42 ft (18.42 m) below land-surface datum, Dec. 20, 1970.

REVISIONS (WATER YEARS).--WDR TN-76-1: 1940-75.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	54.62	JAN 31	55.27	MAR 29	55.27	MAY 30	56.52	JUL 26	57.48	SEP 28	57.52
DEC 3	55.02	FEB 26	55.19	MAY 9	56.01	JUN 29	57.13	AUG 28	57.48		

352112089571300. Local number, Sh:U-2.

LOCATION.--Lat 35°21'12", long 89°57'13", Hydrologic Unit 08010209, 3 mi (4.8 km) west of Millington at Shelby Road and Shake Rag Road, Sloanville.
Owner: T. D. Ervin.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 12 in (460 to 300 mm), depth 440 ft (134 m), cased to 360 ft (110 m), screened 360 to 440 ft (110 to 134 m).

DATUM.--Land-surface datum is 268.76 ft (81.92 m) above mean sea level. Measuring point: Top of casing, 1.60 ft 0.49 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--June 1953 to current year. Analog record June 1953 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.59 ft (12.07 m) below land-surface datum, June 29, 1953; lowest recorded, 59.12 ft (18.02 m) below land-surface datum during period August through September 1977, from maximum-minimum recorder.

REVISIONS (WATER YEARS).--WDR TN-76-1: 1940-75.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 5	56.30	JAN 31	56.01	MAR 29	55.30	MAY 30	56.85	JUL 26	57.79	SEP 28	58.35
DEC 3	56.10	FEB 26	56.07	MAY 9	56.00	JUN 29	57.40	AUG 28	58.65		

WILLIAMSON COUNTY

355505086541100. Local number, Wm:M-1.

LOCATION.--Lat 35°55'05", long 86°54'11", Hydrologic Unit 05130204, on Horton Lane, 0.8 mi (1.3 km) west of Carter's Creek Road, near Franklin.
Owner: Tennessee Division of Geology and U. S. Geological Survey.

AQUIFER:--Knox Dolomite of late Cambrian and early Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 6 in (150 mm), depth 1,160 ft (354 m), cased to 473 ft (144 m), open end.

DATUM.--Land-surface datum is 712 ft (217 m) above mean sea level. Measuring point: Top of casing 2.80 ft (0.85 m) above land-surface datum.

REMARKS.--Period of record low resulted from water-level measurements on the well during a 72 hour aquifer test.

PERIOD OF RECORD.--January 1950 to current year. Water-level recorder December 1951 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 84.21 ft (25.67 m) below land-surface datum, Mar. 10, 1952; lowest recorded 87.11 ft (26.55 m) below land-surface datum, Sept. 10, 1970; highest water level measured, 85.43 ft (26.04 m) below land-surface datum, Feb. 19, 1974; lowest measured, 114.81 ft (34.99 m) below land-surface datum, Jan. 31, 1950.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DATE	WATER LEVEL
OCT 4	86.46
APR 6	87.65

355749086533300. Local number, Wm:M-8.

LOCATION.--Lat 35°57'49", long 86°53'33", Hydrologic Unit 05130204, 3.9 mi (6.3 km) north of Franklin.
Owner: City of Franklin.

AQUIFER.--Carters Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (250 mm) to 54 ft (16.5 m), 9 in (230 mm) to 170 ft (51.8 m), 6 in (150 mm) to 192 ft (58.5 m) below land surface, cased to 54 ft (16.5 m), open end.

INSTRUMENTATION.--Water-level recorder since August 1976.

DATUM.--Altitude of land-surface datum is 630 ft (192 m) above mean sea level. Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

REMARKS.--Period of record low resulted from water levels being affected by 48 hour aquifer test run on a nearby well.

PERIOD OF RECORD.--August 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.00 ft (5.18 m) below land-surface datum, Mar. 5, 1977; lowest, 42.71 ft (13.02 m) below land-surface datum, Dec. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, AUGUST TO SEPTEMBER 1976
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	--	--	--	--	34.60	33.87
10	--	--	--	--	--	--	--	--	--	--	34.64	34.23
15	--	--	--	--	--	--	--	--	--	--	34.66	34.38
20	--	--	--	--	--	--	--	--	--	--	34.66	34.46
25	--	--	--	--	--	--	--	--	--	--	34.68	34.55
EOM	--	--	--	--	--	--	--	--	--	--	34.64	34.56

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.62	32.90	34.30	34.32	34.09	19.98	25.27	33.94	34.53	34.27	34.60	34.62
10	34.44	33.49	42.71	33.94	34.19	29.27	31.29	33.86	34.60	34.03	34.71	34.63
15	34.50	33.80	34.18	32.29	34.19	25.37	32.86	34.12	34.05	34.34	34.77	34.22
20	29.88	34.05	34.16	33.47	34.24	30.99	33.47	34.27	34.12	34.38	34.52	34.40
25	31.08	34.20	34.21	33.73	28.73	32.74	31.37	34.38	34.27	34.46	34.56	34.49
EOM	--	34.24	34.29	33.93	30.18	33.45	33.47	34.45	34.12	34.49	34.60	34.13

WTR YEAR 1977 MAX 17.00 MAR 5, 1977 MIN 42.71 DEC 10, 1976

WILLIAMSON COUNTY--Continued

355630086522900. Local number, Wm:N-10.

LOCATION.--Lat 35°56'30", long 86°52'29", Hydrologic Unit 05130204, 1.2 mi (1.9 km) north of Franklin. Owner: City of Franklin.

AQUIFER.--Carters Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter 10 in (250 mm) to 20 ft (6.1 m), 9 in (230 mm) to 110 ft (33.5 m), 6 in (150 mm) to 153 ft (46.6 m), cased to 20 ft (61 m), open end.

INSTRUMENTATION.--Water-level recorder since July 1976.

DATUM.--Altitude of land-surface datum is 615 ft (187 m) above mean sea level. Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

REMARKS.--Period of record low resulted from water levels being affected by 48 hour aquifer test run on a nearby well.

PERIOD OF RECORD.--July 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.33 ft (5.28 m) below land-surface datum, Mar. 13, 1977; lowest, 73.54 ft (22.41 m) below land-surface datum, Dec. 16, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, JULY TO SEPTEMBER 1976
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	--	--	--	--	--	--	--	--	--	38.17	37.77
10	--	--	--	--	--	--	--	--	--	--	37.62	38.13
15	--	--	--	--	--	--	--	--	--	--	36.94	38.20
20	--	--	--	--	--	--	--	--	--	--	36.99	38.26
25	--	--	--	--	--	--	--	--	--	38.13	38.17	38.28
EOM	--	--	--	--	--	--	--	--	--	37.13	38.19	38.29

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	38.29	37.11	38.03	38.05	37.89	--	28.69	--	--	37.82	38.20	38.29
10	38.14	52.09	38.16	37.20	37.98	--	--	--	--	37.63	37.93	38.33
15	38.21	37.46	70.97	34.71	38.00	26.15	--	--	--	37.90	38.11	38.05
20	38.24	37.73	49.63	--	38.10	--	--	--	--	37.99	38.15	38.22
25	38.07	37.94	37.78	--	27.55	36.47	32.11	--	--	38.10	38.08	38.32
EOM	--	37.98	38.01	37.72	30.60	37.44	--	--	37.42	38.14	38.23	38.06

WTR YEAR 1977 MAX 17.33 MAR 13, 1977 MIN 73.54 DEC 16, 1976

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	GEO-LOGIC UNIT	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN)	INSTAN-TANEOUS FLOW RATE (GPM)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
ANDERSON COUNTY											
361017084205600	--	77-05-23	100	45	E5.0	340	7.7	17.0	0	2	--
361155084021600	--	77-05-16	300	40	E5.0	575	7.2	17.0	0	25	--
BLEDSOE COUNTY											
353727085112100	--	77-06-01	350	--	--	225	7.4	13.0	0	5	--
354224085062000	--	77-06-02	100	40	E5.0	280	7.8	17.0	0	7	--
CAMPBELL COUNTY											
362123084084300	--	77-06-08	250	20	5.0	480	7.6	15.0	0	1	--
363452084062600	--	77-06-29	--	20	E150	710	7.9	15.0	5	1	--
CLAIBORNE COUNTY											
363013083473000	--	77-06-08	160	45	E5.0	570	7.6	15.0	0	2	--
363330083563200	--	77-06-29	--	20	E3.0	410	7.8	15.0	5	1	--
CUMBERLAND COUNTY											
355228085044800	--	77-06-14	180	30	E20	220	7.7	14.0	5	1	--
355334084584800	--	77-06-13	70	45	E5.0	40	5.6	16.0	5	1	--
FENTRESS COUNTY											
361346085003000	--	77-05-24	157	60	E5.0	150	6.8	14.0	0	4	--
362157084533000	--	77-05-25	--	--	E8.0	20	5.3	13.0	0	1	--
FRANKLIN COUNTY											
350254086155800	--	77-06-22	80	--	130	290	7.0	16.0	5	2	--
350724086114200	--	77-06-22	68	--	125	300	7.1	16.0	5	2	--
351240086044000	--	77-06-22	150	60	30	300	7.3	15.0	5	1	--
GRUNDY COUNTY											
351703085515500	--	77-06-21	155	60	E10	240	7.1	16.0	5	1	--
352057085421700	--	77-06-22	242	20	E5.0	230	7.7	16.0	5	2	--
HAMILTON COUNTY											
351147085130800	--	77-06-29	67	--	5000	200	7.4	14.0	5	1	--
352038085081300	--	77-06-29	390	--	200	180	7.9	16.0	5	1	--
352532085084800	--	77-06-29	--	25	E8.0	180	7.1	17.0	5	1	--
LINCOLN COUNTY											
350239086332000	337FRPN	76-12-16	127	--	--	75	5.6	16.0	10	10	<1
MARION COUNTY											
350029085395000	--	77-06-21	250	120	E5.0	30	5.5	16.0	5	1	--
351422085502200	--	77-06-21	100	20	E10	207	6.2	17.0	5	2	--
MORGAN COUNTY											
360538084343100	--	77-05-18	400	25	E30	205	6.4	12.0	70	25	--
361504084395300	--	77-05-23	900	--	--	450	8.0	16.0	0	2	--
OVERTON COUNTY											
361536085223400	--	77-06-27	100	20	E5.0	640	7.4	20.0	5	1	--
362450085263200	--	77-05-11	155	60	E5.0	1050	7.2	16.0	10	2	--
PICKETT COUNTY											
363304084475600	--	77-05-25	275	25	E5.0	10	5.2	14.0	0	1	--
363416085080500	--	77-05-25	--	45	E5.0	480	7.4	17.0	0	1	--
363658085055700	--	77-05-25	97	30	E5.0	300	7.3	16.0	0	3	--

Geological unit (aquifer):

337FRPN - Fort Payne Formation

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	FECAL COLIFORM .7UM-MF (COL./100 ML)	FECAL STREPTOCOCCI KF AGAR (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)
ANDERSON COUNTY--Continued											
361017084205600	77-05-23	--	--	64	0	19	3.9	60	67	3.3	1.6
361155084021600	77-05-16	--	--	320	8	90	23	6.5	4	.2	2.6
BLEDSOE COUNTY--Continued											
353727085112100	77-06-01	--	--	100	10	35	3.4	3.0	6	.1	1.1
354224085062000	77-06-02	--	--	120	13	45	1.3	2.8	5	.1	.8
CAMPBELL COUNTY--Continued											
362123084084300	77-06-08	--	--	240	14	55	26	1.8	2	.1	.9
363452084062600	77-06-29	--	--	51	0	15	3.4	160	86	9.7	4.5
CLAIBORNE COUNTY--Continued											
363013083473000	77-06-08	--	--	190	0	59	11	36	29	1.1	2.8
363330083563200	77-06-29	--	--	51	0	14	4.0	70	74	4.2	1.9
CUMBERLAND COUNTY--Continued											
355228085044800	77-06-14	--	--	85	0	26	4.8	11	22	.5	2.0
355334084584800	77-06-13	--	--	13	3	1.9	1.9	1.4	19	.2	.4
FENTRESS COUNTY--Continued											
361346085003000	77-05-24	--	--	64	0	19	4.1	3.1	9	.2	2.4
362157084533000	77-05-25	--	--	4	0	1.4	.2	1.2	34	.3	.6
FRANKLIN COUNTY--Continued											
350254086155800	77-06-22	--	--	140	9	43	7.9	3.1	5	.1	.6
350724086114200	77-06-22	--	--	150	15	50	6.7	1.7	2	.1	.7
351240086044000	77-06-22	--	--	150	10	48	7.1	1.5	2	.1	.9
GRUNDY COUNTY--Continued											
351703085515500	77-06-21	--	--	110	24	34	6.7	1.8	3	.1	.8
352057085421700	77-06-22	--	--	78	0	21	6.3	17	31	.8	2.4
HAMILTON COUNTY--Continued											
351147085130800	77-06-29	--	--	91	9	29	4.6	2.0	5	.1	.9
352038085081300	77-06-29	--	--	97	0	31	4.7	3.3	7	.1	.7
352532085084800	77-06-29	--	--	61	0	18	4.0	7.1	20	.4	1.6
LINCOLN COUNTY--Continued											
350239086332000	76-12-16	<1	<1	19	3	6.0	1.0	1.7	16	.2	.2
MARION COUNTY--Continued											
350029085395000	77-06-21	--	--	12	2	3.0	1.0	.5	8	.1	.4
351422085502200	77-06-21	--	--	58	33	14	5.5	7.8	22	.4	3.4
MORGAN COUNTY--Continued											
360538084343100	77-05-18	--	--	73	27	20	5.7	6.3	15	.3	1.2
361504084395300	77-05-23	--	--	10	0	2.5	1.0	130	96	18	1.7
OVERTON COUNTY--Continued											
361536085223400	77-06-27	--	--	270	28	75	21	13	9	.3	2.0
362450085263200	77-05-11	--	--	570	320	180	29	9.5	3	.2	2.7
PICKETT COUNTY--Continued											
363304084475600	77-05-25	--	--	1	0	.3	.1	.7	50	.3	.3
363416085080500	77-05-25	--	--	240	25	59	22	4.9	4	.1	.9
363658085055700	77-05-25	--	--	140	10	45	6.9	1.7	3	.1	.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
ANDERSON COUNTY--Continued											
361017084205600	77-05-23	210	0	170	6.7	.6	13	.2	17	210	219
361155084021600	77-05-16	380	0	310	38	.4	13	.3	10	334	336
BLEDSOE COUNTY--Continued											
353727085112100	77-06-01	110	0	90	7.0	7.3	6.1	.0	6.2	115	116
354224085062000	77-06-02	130	0	107	3.3	3.1	10	.0	6.9	160	134
CAMPBELL COUNTY--Continued											
362123084084300	77-06-08	275	0	226	11	15	5.4	.1	7.4	257	247
363452084062600	77-06-29	470	0	385	9.5	1.2	11	.2	14	438	441
CLAIBORNE COUNTY--Continued											
363013083473000	77-06-08	270	0	220	11	19	15	1.4	7.0	288	284
363330083563200	77-06-29	230	0	190	5.8	.7	8.0	.4	19	225	232
CUMBERLAND COUNTY--Continued											
355228085044800	77-06-14	130	0	110	4.2	2.9	.8	.1	14	131	126
355334084584800	77-06-13	12	0	10	48	1.9	2.6	.0	8.4	28	24
FENTRESS COUNTY--Continued											
361346085003000	77-05-24	84	0	69	21	2.8	.9	.0	13	81	88
362157084533000	77-05-25	8	0	7	64	.1	1.3	.0	7.3	22	16
FRANKLIN COUNTY--Continued											
350254086155800	77-06-22	160	0	131	26	4.6	5.4	.1	6.8	155	150
350724086114200	77-06-22	165	0	135	21	8.7	3.9	.0	7.9	167	161
351240086044000	77-06-22	170	0	140	14	5.6	3.9	.1	7.4	154	158
GRUNDY COUNTY--Continued											
351703085515500	77-06-21	105	0	86	13	19	5.6	.1	6.7	132	126
352057085421700	77-06-22	140	0	110	4.5	1.3	1.1	.0	13	130	131
HAMILTON COUNTY--Continued											
351147085130800	77-06-29	100	0	82	6.4	10	2.4	.0	6.4	126	105
352038085081300	77-06-29	120	0	98	2.4	3.0	1.7	.1	9.6	118	113
352532085084800	77-06-29	91	0	75	12	1.7	.8	.1	18	97	97
LINCOLN COUNTY--Continued											
350239086332000	76-12-16	20	0	16	80	1.7	2.1	.0	8.4	47	31
MARION COUNTY--Continued											
350029085395000	77-06-21	12	0	10	61	1.3	1.1	.0	7.7	27	21
351422085502200	77-06-21	30	0	25	30	35	13	.1	12	107	110
MORGAN COUNTY--Continued											
360538084343100	77-05-18	56	0	46	36	28	5.5	.1	13	114	121
361504084395300	77-05-23	300	0	250	4.8	6.4	26	.8	10	325	326
OVERTON COUNTY--Continued											
361536085223400	77-06-27	300	0	246	19	30	19	.3	10	347	318
362450085263200	77-05-11	310	0	250	31	300	15	.3	10	810	699
PICKETT COUNTY--Continued											
363304084475600	77-05-25	3	0	2	30	.2	.8	.0	5.4	9	9
363416085080500	77-05-25	260	0	210	17	19	11	.1	13	278	258
363658085055700	77-05-25	160	0	130	13	5.7	2.3	.1	11	167	152

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL PHOS-PHORUS (PO4) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
ANDERSON COUNTY--Continued											
361017084205600	77-05-23	.00	.05	.05	.19	.58	--	310	--	80	3.2
361155084021600	77-05-16	.00	.00	.00	.01	.03	--	2400	--	860	6.8
BLEDSOE COUNTY--Continued											
353727085112100	77-06-01	.88	.00	.88	.01	.03	--	0	--	0	1.8
354224085062000	77-06-02	2.8	.00	2.8	.03	.09	--	0	--	10	6.8
CAMPBELL COUNTY--Continued											
362123084084300	77-06-08	1.6	.00	1.6	.00	.00	--	10	--	30	3.1
363452084062600	77-06-29	.00	.00	.00	.12	.37	--	110	--	10	3.2
CLAIBORNE COUNTY--Continued											
363013083473000	77-06-08	.30	.06	.36	.00	.00	--	20	--	50	4.7
363330083563200	77-06-29	.00	.00	.00	.24	.74	--	180	--	10	4.1
CUMBERLAND COUNTY--Continued											
355228085044800	77-06-14	.02	.00	.02	.05	.15	--	60	--	60	3.6
355334084584800	77-06-13	.77	.00	.77	.00	.00	--	10	--	30	3.5
FENTRESS COUNTY--Continued											
361346085003000	77-05-24	.03	.00	.03	.00	.00	--	1400	--	290	4.7
362157084533000	77-05-25	1.0	.00	1.0	.00	.00	--	10	--	10	2.3
FRANKLIN COUNTY--Continued											
350254086155800	77-06-22	2.8	.00	2.8	.02	.06	--	0	--	0	4.1
350724086114200	77-06-22	2.3	.00	2.3	.03	.09	--	10	--	0	2.4
351240086044000	77-06-22	2.0	.00	2.0	.02	.06	--	10	--	0	3.2
GRUNDY COUNTY--Continued											
351703085515500	77-06-21	3.1	.00	3.1	.01	.03	--	10	--	0	3.3
352057085421700	77-06-22	.18	.00	.18	.27	.83	--	20	--	10	3.6
HAMILTON COUNTY--Continued											
351147085130800	77-06-29	.75	.00	.75	.00	.00	--	10	--	0	4.2
352038085081300	77-06-29	.37	.00	.37	.01	.03	--	40	--	0	3.6
352532085084800	77-06-29	.18	.00	.18	.13	.40	--	290	--	90	3.1
LINCOLN COUNTY--Continued											
350239086332000	76-12-16	--	--	--	--	--	420	0	80	30	--
MARION COUNTY--Continued											
350029085395000	77-06-21	.05	.00	.05	.01	.03	--	230	--	30	4.0
351422085502200	77-06-21	.96	.03	.99	.04	.12	--	2900	--	1400	5.6
MORGAN COUNTY--Continued											
360538084343100	77-05-18	.01	.00	.01	.07	.21	--	14000	--	50	13
361504084395300	77-05-23	.05	.00	.05	.16	.49	--	20	--	20	3.0
OVERTON COUNTY--Continued											
361536085223400	77-06-27	.01	.00	.01	.00	.00	--	200	--	10	2.5
362450085263200	77-05-11	1.6	.09	1.7	.00	.00	--	20	--	50	3.2
PICKETT COUNTY--Continued											
363304084475600	77-05-25	.02	.00	.02	.00	.00	--	30	--	20	2.1
363416085080500	77-05-25	.83	.00	.83	.00	.00	--	20	--	0	3.0
363658085055700	77-05-25	1.0	.00	1.0	.01	.03	--	10	--	0	5.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	GEOLOGIC UNIT	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	INSTANTANEOUS FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	IMMEDIATE COLIFORM (COL. PER 100 ML)
PUTNAM COUNTY											
360844085155900	--	77-05-10	145	20	E50	260	4.8	15.0	0	9	--
361151085262600	--	77-05-11	157	E30	E20	1700	7.2	16.0	0	2	--
RHEA COUNTY											
352919084564100	--	77-05-31	--	10	E5.0	580	7.5	17.0	0	2	--
353152085031200	--	77-06-01	400	30	E5.0	250	7.5	15.0	0	1	--
353739084492100	--	77-05-31	250	--	--	250	7.6	19.0	0	1	--
ROANE COUNTY											
354452084394500	--	77-06-03	--	25	E5.0	375	7.5	17.0	0	2	--
355225084263000	--	77-05-24	--	--	--	400	7.8	16.0	0	1	--
SCOTT COUNTY											
362938084322700	--	77-05-18	50	30	E5.0	290	6.8	15.0	50	30	--
SEQUATCHIE COUNTY											
352005085245000	--	77-06-15	102	60	E5.0	290	7.5	16.0	5	1	--
352753085310200	--	77-06-15	--	35	E5.0	370	7.3	16.0	5	4	--
SHELBY COUNTY											
350218089511701	124CLBR	77-09-06	--	--	--	95	5.7	19.0	5	2	--
350540090061701	124CLBR	77-09-07	--	--	--	180	5.8	18.0	5	3	--
350711089560202	124CLBR	77-09-06	--	--	--	140	5.8	18.0	5	3	--
350909090014601	--	77-08-11	2656	--	--	1400	6.2	31.0	250	40	--
350935090013701	124CLBR	77-09-07	--	--	--	150	5.8	18.5	10	6	--
351109089512901	124CLBR	77-09-07	--	--	--	120	5.8	17.5	10	5	--
352047089523001	124CLBR	77-09-07	--	--	--	180	5.8	17.5	10	5	--
VAN BUREN COUNTY											
354753085311300	--	77-06-15	156	30	E10	925	7.4	15.0	5	2	--
WHITE COUNTY											
354853085341600	--	77-06-14	123	40	E7.0	2900	7.6	15.0	5	1	--
355724085230400	--	77-06-14	30	45	E6.0	270	7.4	15.0	5	1	--
WILLIAMSON COUNTY											
355030086450500	364RDLY	77-07-28	250	390	100	1650	7.0	18.0	5	7	<1
355035086450000	364RDLY	77-07-29	225	360	50	670	7.1	17.0	5	2	B13
355620086522200	364CRRS	76-12-14	150	170	--	365	6.9	15.0	--	1	--
	364CRRS	76-12-14	150	570	--	345	6.8	15.0	--	1	--
	364CRRS	76-12-15	150	1350	--	360	6.8	16.0	--	4	--
	364CRRS	76-12-17	150	145	--	375	6.9	16.0	5	7	--
355630086522900	364CRRS	76-11-05	153	90	8.0	430	7.2	15.0	1	1	39
	364CRRS	77-01-26	153	85	10	430	6.7	15.0	0	3	187
	364CRRS	77-02-16	153	90	10	430	7.0	14.5	0	1	<1
	364CRRS	77-04-07	153	90	10	340	7.2	15.0	0	1	3104
	364CRRS	77-06-29	153	77	10	420	7.2	16.0	0	1	47
355747086533100	364CRRS	76-12-08	200	90	--	440	7.2	14.5	--	3	--
	364CRRS	76-12-08	200	570	--	460	7.0	15.0	--	7	--
	364CRRS	76-12-09	200	1350	--	460	7.0	16.0	--	15	--
	364CRRS	76-12-10	200	2775	--	460	7.0	16.5	0	3	--
355749086533300	364CRRS	76-11-05	192	110	8.0	395	6.7	15.0	2	1	61
	364CRRS	77-01-26	192	115	10	420	6.8	16.0	0	1	46
	364CRRS	77-02-16	192	90	10	420	6.9	15.0	0	6	88
	364CRRS	77-04-07	192	90	10	380	6.8	15.0	0	1	B348
	364CRRS	77-06-29	192	90	10	460	7.0	16.0	0	1	55

B--Results based on colony counts outside the acceptable range (non-ideal colony count).

E--Estimated value.

Geological unit (aquifer):

124CLBR - Claiborne Group
364CRRS - Carters Limestone
364RDLY - Ridley Limestone

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	FECAL COLI-FORM .7UM-MF (COL./100 ML)	FECAL STREP-TOCOCCI KF AGAR (COL. PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
			PUTNAM COUNTY--Continued								
360844085155900	77-05-10	--	--	87	79	24	6.6	11	21	.5	2.7
361151085262600	77-05-11	--	--	800	550	250	42	90	20	1.4	4.5
			RHEA COUNTY--Continued								
352919084564100	77-05-31	--	--	250	8	64	23	8.8	7	.2	5.8
353152085031200	77-06-01	--	--	84	0	26	4.6	16	29	.8	2.2
353739084492100	77-05-31	--	--	120	9	30	9.8	1.2	2	.0	.7
			ROANE COUNTY--Continued								
354452084394500	77-06-03	--	--	150	0	51	5.9	14	17	.5	1.7
355225084263000	77-05-24	--	--	140	0	43	7.9	29	31	1.1	2.7
			SCOTT COUNTY--Continued								
362938084322700	77-05-18	--	--	130	11	35	9.3	9.0	13	.4	2.6
			SEQUATCHIE COUNTY--Continued								
352005085245000	77-06-15	--	--	130	1	33	12	3.8	6	.1	.7
352753085310200	77-06-15	--	--	180	15	58	8.3	3.9	4	.1	2.8
			SHELBY COUNTY--Continued								
350218089511701	77-09-06	--	--	35	2	8.9	3.2	3.8	19	.3	.5
350540090061701	77-09-07	--	--	74	0	17	7.6	8.8	20	.4	.9
350711089560202	77-09-06	--	--	31	0	7.1	3.2	12	45	.9	.9
350909090014601	77-08-11	--	--	7	0	2.3	.4	420	99	67	2.8
350935090013701	77-09-07	--	--	65	0	15	6.7	8.6	22	.5	.8
351109089512901	77-09-07	--	--	38	0	8.6	4.0	7.6	30	.5	1.0
352047089523001	77-09-07	--	--	85	0	19	9.2	7.1	15	.3	.8
			VAN BUREN COUNTY--Continued								
354753085311300	77-06-15	--	--	510	320	130	46	12	5	.2	1.0
			WHITE COUNTY--Continued								
354853085341600	77-06-14	--	--	2000	1800	520	170	50	5	.5	3.0
355724085230400	77-06-14	--	--	130	15	40	7.3	2.5	4	.1	2.5
			WILLIAMSON COUNTY--Continued								
355030086450500	77-07-28	<1	82	800	520	190	80	80	18	1.2	7.2
355035086450000	77-07-29	<1	82	340	93	83	32	11	7	.3	4.6
355620086522200	76-12-14	--	--	190	25	70	4.8	1.3	1	.0	.7
	76-12-14	--	--	190	22	68	4.8	1.3	1	.0	.6
	76-12-15	--	--	190	28	69	5.0	1.2	1	.0	.6
	76-12-17	--	--	200	27	68	6.3	1.6	2	.1	.7
355630086522900	76-11-05	82	83	220	30	80	5.5	1.7	2	.1	.7
	77-01-26	<1	<1	250	41	90	6.1	1.6	1	.0	.8
	77-02-16	<1	86	230	36	83	5.5	1.3	1	.0	.6
	77-04-07	<1	81	180	38	66	4.4	1.3	2	.0	.6
	77-06-29	83	47	210	38	76	3.8	1.4	1	.0	.6
355747086533100	76-12-08	--	--	240	28	85	6.3	2.3	2	.1	.8
	76-12-08	--	--	240	27	84	6.1	2.3	2	.1	.8
	76-12-09	--	--	240	30	86	6.0	2.2	2	.1	.7
	76-12-10	--	--	240	30	86	6.1	2.2	2	.1	.7
355749086533300	76-11-05	82	81	210	29	77	5.4	1.5	2	.0	.7
	77-01-26	<1	193	240	44	88	5.4	1.4	1	.0	.7
	77-02-16	<1	87	260	41	93	6.1	1.7	1	.0	.7
	77-04-07	B383	308	190	36	68	4.6	1.6	2	.1	.9
	77-06-29	B13	99	220	20	79	5.4	1.8	2	.1	.9

B--Results based on colony counts outside the acceptable range (non-ideal colony count).

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)
					PUTNAM COUNTY--Continued						
360844085155900	77-05-10	10	0	8	254	75	19	.0	7.8	167	151
361151085262600	77-05-11	300	0	250	30	680	28	.6	12	1400	1260
					RHEA COUNTY--Continued						
352919084564100	77-05-31	300	0	250	15	22	7.2	.2	9.1	274	288
353152085031200	77-06-01	140	0	110	7.1	5.2	4.3	.1	11	144	139
353739084492100	77-05-31	130	0	110	5.2	3.5	2.8	.0	6.6	105	119
					ROANE COUNTY--Continued						
354452084394500	77-06-03	200	0	160	10	5.0	4.2	.0	17	208	197
355225084263000	77-05-24	230	0	190	5.8	6.3	7.9	.1	16	211	226
					SCOTT COUNTY--Continued						
362938084322700	77-05-18	140	0	110	36	20	4.4	.1	23	155	179
					SEQUATCHIE COUNTY--Continued						
352005085245000	77-06-15	160	0	131	8.1	2.3	5.6	.0	9.3	144	146
352753085310200	77-06-15	200	0	160	16	14	1.3	.0	12	201	199
					SHELBY COUNTY--Continued						
350218089511701	77-09-06	41	0	34	131	2.5	1.7	.1	10	56	51
350540090061701	77-09-07	110	0	90	279	2.5	3.5	.0	9.8	109	105
350711089560202	77-09-06	52	0	43	132	7.0	7.1	.0	17	80	81
350909090014601	77-08-11	1100	0	900	11	3.9	7.6	3.6	14	1010	997
350935090013701	77-09-07	95	0	78	241	2.5	3.2	.2	13	87	98
351109089512901	77-09-07	49	0	40	124	5.5	4.4	.0	12	71	68
352047089523001	77-09-07	110	0	90	279	2.7	2.1	.1	19	117	115
					VAN BUREN COUNTY--Continued						
354753085311300	77-06-15	240	0	200	15	310	5.0	.2	9.3	648	632
					WHITE COUNTY--Continued						
354853085341600	77-06-14	190	0	160	7.6	1800	18	.9	14	2930	2670
355724085230400	77-06-14	140	0	115	8.9	12	5.7	.1	5.5	180	145
					WILLIAMSON COUNTY--Continued						
355030086450500	77-07-28	350	0	290	56	580	38	.9	9.1	1210	1160
355035086450000	77-07-29	300	0	250	38	95	7.2	.4	7.6	380	389
355620086522200	76-12-14	207	0	170	42	10	2.5	.2	9.1	219	201
	76-12-14	204	0	167	52	9.6	2.5	.1	9.2	211	197
	76-12-15	201	0	165	51	9.6	2.4	.1	9.4	215	196
	76-12-17	206	0	169	42	14	2.5	.1	9.4	216	204
355630086522900	76-11-05	234	0	192	24	18	3.3	.2	9.0	245	234
	77-01-26	255	0	209	81	13	4.5	.1	9.9	271	252
	77-02-16	237	0	194	38	24	3.8	.1	9.3	254	244
	77-04-07	177	0	150	18	15	4.2	.1	8.0	196	187
	77-06-29	210	0	172	21	14	3.5	.1	8.7	239	212
355747086533100	76-12-08	256	0	210	26	19	4.1	.2	8.4	269	252
	76-12-08	254	0	208	41	18	4.4	.3	8.6	271	250
	76-12-09	255	0	209	41	18	4.1	.3	8.5	276	252
	76-12-10	256	0	210	41	19	4.1	.2	8.4	274	253
355749086533300	76-11-05	226	0	185	72	10	4.5	.3	9.9	241	221
	77-01-26	241	0	198	61	22	4.1	.1	9.3	263	250
	77-02-16	264	0	217	53	17	4.3	.2	9.5	270	263
	77-04-07	186	0	150	47	9.7	6.2	.1	9.8	219	193
	77-06-29	244	0	200	39	13	4.8	.2	9.6	244	235

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL PHOS-PHORUS (PO4) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL BARIUM (BA) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	HEXA-VALENT CHRO-MIUM (CR6) (UG/L)	TOTAL COPPER (CU) (UG/L)
				PUTNAM COUNTY--Continued							
360844085155900	77-05-10	3.6	.00	3.6	.00	.00	--	--	--	--	--
361151085262600	77-05-11	.01	.00	.01	.01	.03	--	--	--	--	--
				RHEA COUNTY--Continued							
352919084564100	77-05-31	.03	.00	.03	.00	.00	--	--	--	--	--
353152085031200	77-06-01	.00	.00	.00	.01	.03	--	--	--	--	--
353739084492100	77-05-31	.51	.00	.51	.00	.00	--	--	--	--	--
				ROANE COUNTY--Continued							
354452084394500	77-06-03	1.1	.00	1.1	.02	.06	--	--	--	--	--
355225084263000	77-05-24	.24	.00	.24	.00	.00	--	--	--	--	--
				SCOTT COUNTY--Continued							
362938084322700	77-05-18	.00	.00	.00	.08	.25	--	--	--	--	--
				SEQUATCHIE COUNTY--Continued							
352005085245000	77-06-15	7.1	.00	7.1	.00	.00	--	--	--	--	--
352753085310200	77-06-15	.16	.00	.16	.04	.12	--	--	--	--	--
				SHELBY COUNTY--Continued							
350218089511701	77-09-06	.01	.00	.01	.00	.00	0	0	2	0	3
350540090061701	77-09-07	.01	.00	.01	.01	.03	0	0	0	0	2
350711089560202	77-09-06	.00	.00	.00	.00	.00	1	0	0	0	3
350909090014601	77-08-11	.00	.01	.01	.03	.09	1	--	0	--	--
350935090013701	77-09-07	.01	.00	.01	.00	.00	0	0	0	0	4
351109089512901	77-09-07	.01	.00	.01	.01	.03	--	0	0	0	3
352047089523001	77-09-07	.01	.00	.01	.00	.00	0	0	0	0	4
				VAN BUREN COUNTY--Continued							
354753085311300	77-06-15	.00	.00	.00	.00	.00	--	--	--	--	--
				WHITE COUNTY--Continued							
354853085341600	77-06-14	.01	.00	.01	.00	.00	--	--	--	--	--
355724085230400	77-06-14	3.4	.00	3.4	.02	.06	--	--	--	--	--
				WILLIAMSON COUNTY--Continued							
355030086450500	77-07-28	.00	.00	.00	.02	.06	1	0	0	0	0
355035086450000	77-07-29	.00	.00	.00	.01	.03	1	0	0	0	0
355620086522200	76-12-14	--	--	--	--	--	--	--	--	--	--
	76-12-14	--	--	--	--	--	--	--	--	--	--
	76-12-15	--	--	--	--	--	--	--	--	--	--
	76-12-17	1.7	.01	1.7	.28	.86	1	100	1	0	15
355630086522900	76-11-05	1.9	.02	1.9	.34	1.0	1	100	0	0	1
	77-01-26	4.1	.00	4.1	.40	1.2	1	0	0	0	2
	77-02-16	1.5	.09	1.6	.34	1.0	1	0	0	0	3
	77-04-07	2.8	.00	2.8	.43	1.3	1	0	0	0	2
	77-06-29	2.7	.00	2.7	.43	1.3	4	200	0	0	3
355747086533100	76-12-08	--	--	--	--	--	--	--	--	--	--
	76-12-08	--	--	--	--	--	--	--	--	--	--
	76-12-09	--	--	--	--	--	--	--	--	--	--
	76-12-10	2.4	.00	2.4	.24	.74	1	0	0	0	10
355749086533300	76-11-05	4.1	.00	4.1	.47	1.4	1	100	0	0	1
	77-01-26	2.1	.03	2.1	.33	1.0	1	0	0	0	0
	77-02-16	3.2	.00	3.2	.33	1.0	1	0	0	0	4
	77-04-07	4.4	.00	4.4	.49	1.5	0	0	0	0	8
	77-06-29	4.4	.00	4.4	.40	1.2	3	200	0	0	3

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	TOTAL ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
					PUTNAM COUNTY--Continued						
360844085155900	77-05-10	--	20	--	--	100	--	--	--	--	3.1
361151085262600	77-05-11	--	110	--	--	30	--	--	--	--	4.2
					RHEA COUNTY--Continued						
352919084564100	77-05-31	--	50	--	--	10	--	--	--	--	1.4
353152085031200	77-06-01	--	30	--	--	310	--	--	--	--	2.1
353739084492100	77-05-31	--	10	--	--	10	--	--	--	--	2.3
					ROANE COUNTY--Continued						
354452084394500	77-06-03	--	10	--	--	0	--	--	--	--	5.6
355225084263000	77-05-24	--	10	--	--	10	--	--	--	--	2.8
					SCOTT COUNTY--Continued						
362938084322700	77-05-18	--	6200	--	--	40	--	--	--	--	11
					SEQUATCHIE COUNTY--Continued						
352005085245000	77-06-15	--	10	--	--	10	--	--	--	--	2.8
352753085310200	77-06-15	--	10	--	--	10	--	--	--	--	4.7
					SHELBY COUNTY--Continued						
350218089511701	77-09-06	180	150	0	0	0	<.5	0	1	0	5.4
350540090061701	77-09-07	660	650	0	10	10	<.5	0	0	0	5.2
350711089560202	77-09-06	1400	1300	0	20	30	<.5	0	2	20	5.7
350909090014601	77-08-11	27000	50	--	150	20	.0	0	1	--	5.4
350935090013701	77-09-07	780	700	0	10	10	<.5	0	1	0	4.1
351109089512901	77-09-07	1200	1200	0	20	20	--	--	1	40	5.1
352047089523001	77-09-07	640	610	0	10	10	<.5	0	0	0	4.3
					VAN BUREN COUNTY--Continued						
354753085311300	77-06-15	--	570	--	--	20	--	--	--	--	5.6
					WHITE COUNTY--Continued						
354853085341600	77-06-14	--	40	--	--	20	--	--	--	--	3.2
355724085230400	77-06-14	--	10	--	--	0	--	--	--	--	4.0
					WILLIAMSON COUNTY--Continued						
355030086450500	77-07-28	290	290	26	10	10	.2	0	0	10	5.1
355035086450000	77-07-29	160	160	9	10	0	.0	0	0	20	2.0
355620086522200	76-12-14	--	--	--	--	--	--	--	--	--	--
	76-12-14	--	--	--	--	--	--	--	--	--	--
	76-12-15	--	--	--	--	--	--	--	--	--	--
	76-12-17	190	10	8	40	30	.1	0	0	40	1.2
355630086522900	76-11-05	0	0	0	10	10	.0	0	0	20	6.6
	77-01-26	450	20	4	10	0	.0	0	0	10	.0
	77-02-16	80	10	6	10	0	.1	1	0	10	.0
	77-04-07	50	10	4	0	0	.0	0	0	20	2.2
	77-06-29	90	40	13	10	0	.0	0	0	0	--
355747086533100	76-12-08	--	--	--	--	--	--	--	--	--	--
	76-12-08	--	--	--	--	--	--	--	--	--	--
	76-12-09	--	--	--	--	--	--	--	--	--	--
	76-12-10	140	50	8	0	0	.2	0	0	20	3.0
355749086533300	76-11-05	100	20	9	10	10	.0	0	0	20	.0
	77-01-26	30	10	4	10	0	.0	1	0	10	1.5
	77-02-16	640	10	8	10	0	.0	1	0	10	.0
	77-04-07	200	10	16	10	0	.0	0	0	10	6.6
	77-06-29	780	10	2	10	10	.1	0	0	10	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

STATION NUMBER	DATE OF SAMPLE	CYANIDE (CN) (MG/L)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
PUTNAM COUNTY--Continued				
360844085155900	77-05-10	--	--	--
361151085262600	77-05-11	--	--	--
RHEA COUNTY--Continued				
352919084564100	77-05-31	--	--	--
353152085031200	77-06-01	--	--	--
353739084492100	77-05-31	--	--	--
ROANE COUNTY--Continued				
354452084394500	77-06-03	--	--	--
355225084263000	77-05-24	--	--	--
SCOTT COUNTY--Continued				
362936084322700	77-05-18	--	--	--
SEQUATCHIE COUNTY--Continued				
352005085245000	77-06-15	--	--	--
352753085310200	77-06-15	--	--	--
SHELBY COUNTY--Continued				
350218089511701	77-09-06	--	0	--
350540090061701	77-09-07	--	0	--
350711089560202	77-09-06	--	0	--
350909090014601	77-08-11	--	--	--
350935090013701	77-09-07	--	0	--
351109089512901	77-09-07	--	0	--
352047089523001	77-09-07	--	0	--
VAN BUREN COUNTY--Continued				
354753085311300	77-06-15	--	--	--
WHITE COUNTY--Continued				
354853085341600	77-06-14	--	--	--
355724085230400	77-06-14	--	--	--
WILLIAMSON COUNTY--Continued				
355030086450500	77-07-28	.00	0	.00
355035086450000	77-07-29	.00	0	.00
355620086522200	76-12-14	--	--	--
	76-12-14	--	--	--
	76-12-15	--	--	--
	76-12-17	.00	0	--
355630086522900	76-11-05	.00	0	.00
	77-01-26	.00	1	.10
	77-02-16	.00	8	.00
	77-04-07	.00	2	.00
	77-06-29	.00	3	.00
355747086533100	76-12-08	--	--	--
	76-12-08	--	--	--
	76-12-09	--	--	--
	76-12-10	--	10	.00
355749086533300	76-11-05	.00	0	.00
	77-01-26	.00	1	.00
	77-02-16	.00	6	.00
	77-04-07	.00	0	.00
	77-06-29	.00	2	.00

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Battle Creek near Monteagle	460
Bear Creek near Oak Ridge	459
Beaver Dam Creek, above Springfield	468,497
at Owens Chapel	467,496
near Cross Plains	467
near Hubertville	467,496
near Lakeview	496
near Springfield	451,468
tributary near Hubertville	468
tributary near Lakeview	468
tributary near Owens Chapel	468
Beaver Creek, at Huntingdon	397,513
South Fork, at Harbison	458
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Beidleman Creek near Caywood Ford	452,502
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Bent Creek near Springvale	452,501
Benton, Hiwassee River near	273
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Big Bigby Creek at Sandy Hook	372,512
Big Creek near Rogersville	196,508
Big Creek tributary near Rogersville	458
Big Eagle Creek near Livingston	454,465
Big Muddy Creek near Stanton	471
Big Sandy River, at Bruceton	386,513
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Black Branch at Springfield	469,498
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West Fork, at General Bates Drive, at Nashville	456
Browns Fork near Springfield	469,499
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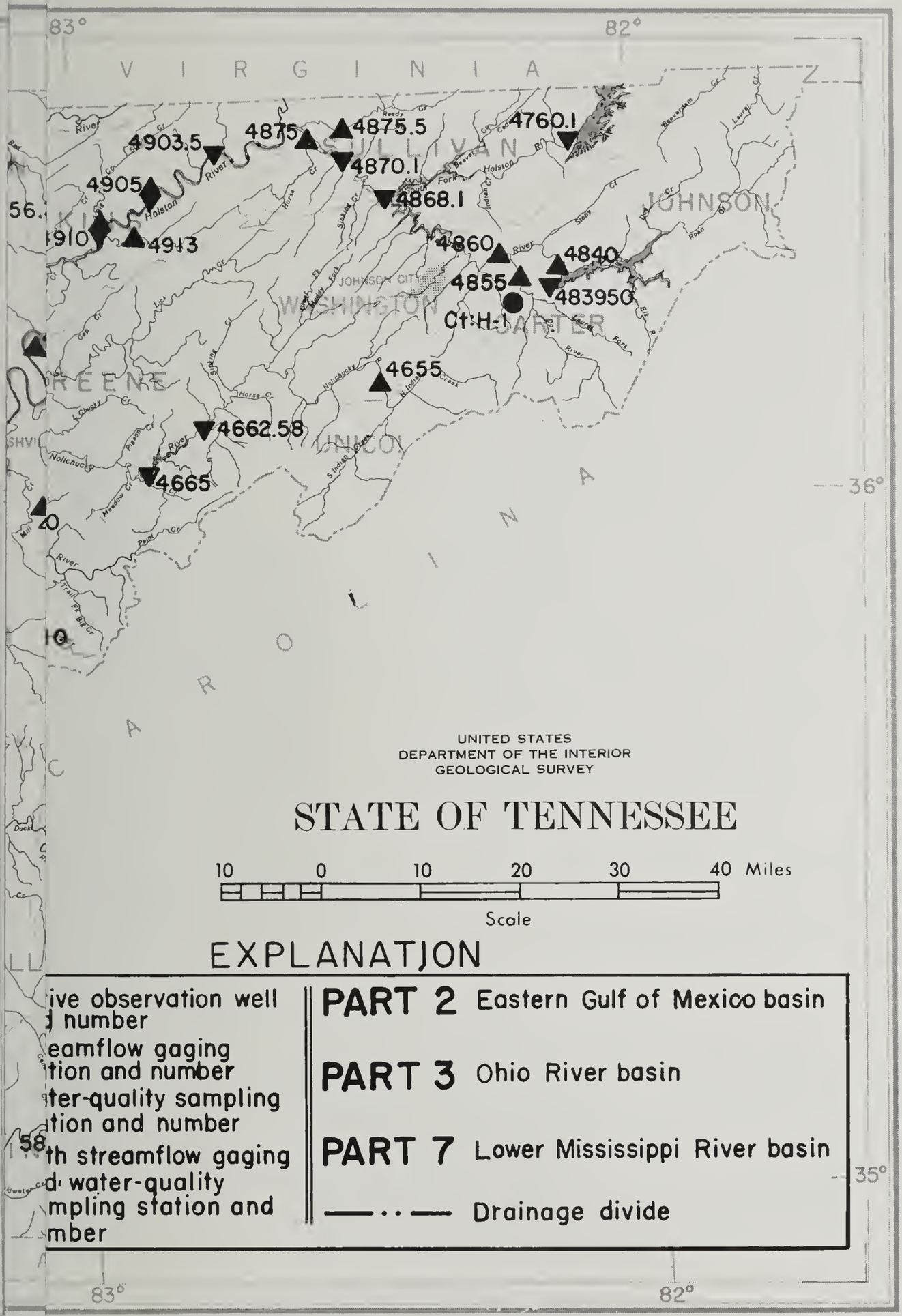
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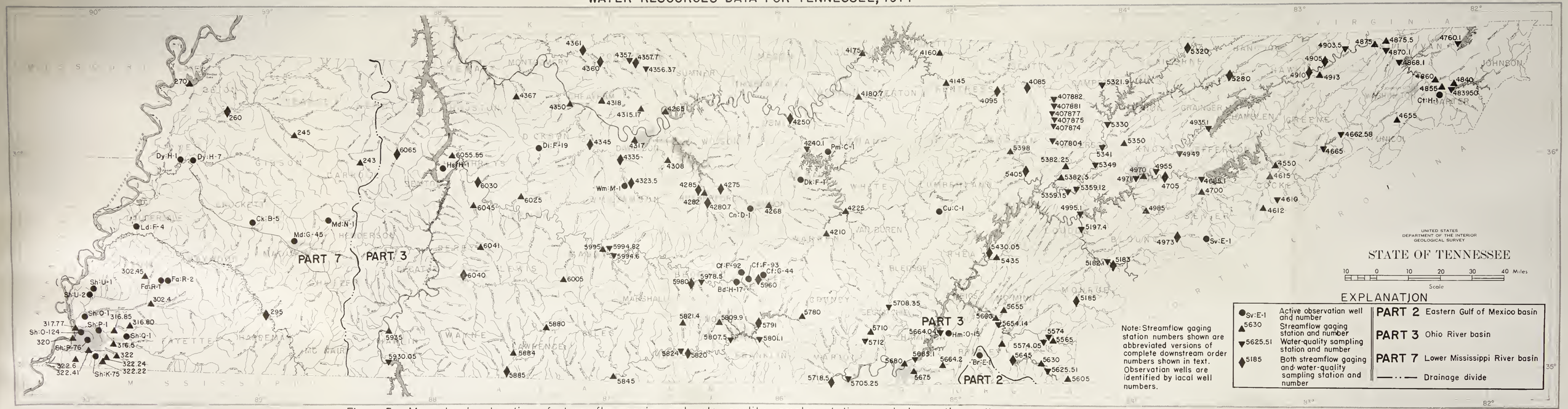
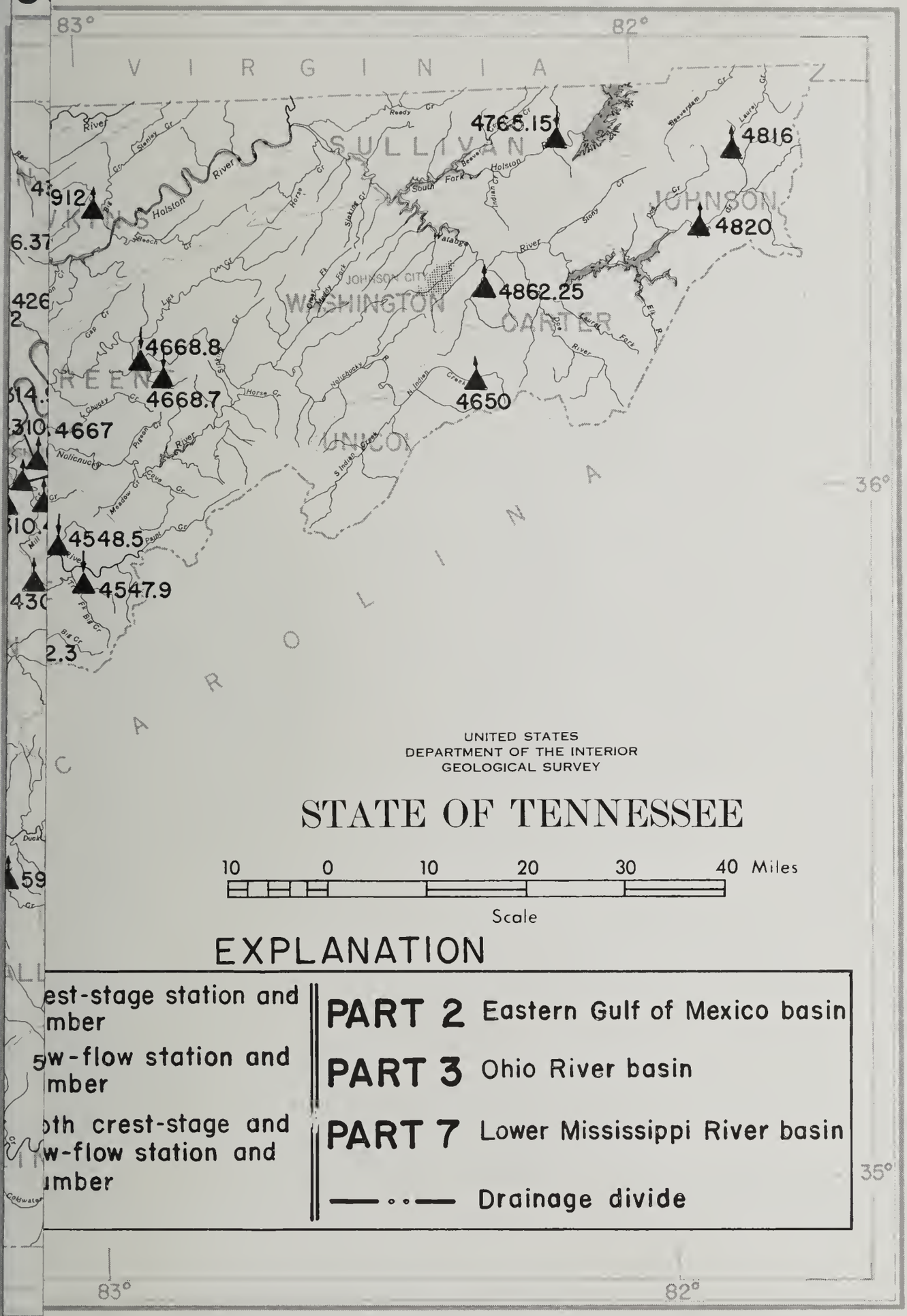


Figure 5.--Map showing location of streamflow gaging and water-quality sampling stations and observation wells.



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PART 7 Lower Mississippi River basin

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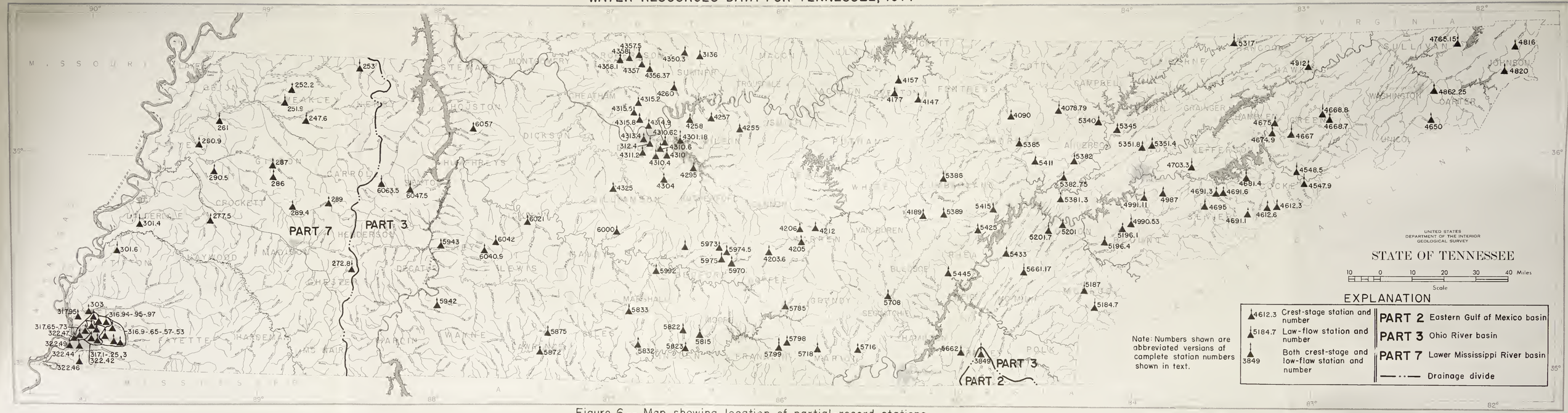

Figure 6.-- Map showing location of partial-record stations.

FACTORS FOR CONVERTING U.S. CUSTOMARY UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the U.S. customary units published herein to the International System of Units (SI). Subsequent reports will contain both the U.S. customary and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply U.S. customary units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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